ADITYA BIRLA



Ref. HIL/KBM/MoEF&CC/1228/2024

Date: 22-05-2024

To, The Director General of Forest (C), Ministry of Environment & Forest and Climate Change, Integrated Regional Office, Ground Floor, Aranya Bhawan, North Block, Sector-19, Naya Raipur, Atal Nagar, Chhattisgarh-492002

Sub: - Status of compliance of EC condition (Half yearly status of compliance report) in respect of Kudag Bauxite Mine (Lease area- 377.116 Ha.) of M/s Hindalco Industries Limited of Chhattisgarh state for the period from October 2023 – March 2024.

Ref No: - Environment Clearance Letter No-J-11015/354/2007-IA. II (M) dated July 27, 2007

Dear Sir,

We do herewith submit half yearly status of EC compliance report in respect of Kudag Bauxite Mine, Lease area -377.116 Ha, of M/s Hindalco Industries Limited P.O- Kusmi, Dist.- Balrampur- Ramanujganj, Chhattisgarh state, PIN-497224 for the period from October 2023 – March 2024. The lease details is as below: -

Lease area	Production Capacity	Lease Period
377.116 Ha.	60000 Tonnes	24.12.1996 to 23.12.2046 (50 years)

We trust that the measures taken towards environment safeguard comply with the stipulated environmental conditions. We assure that we comply all the conditions laid down in the consent letter and also abide to follow all the Rules and Regulations.

Thanking you, Yours's faithfully For, Hindalco Industries Limited

(Sanjay Pardhi) Agent of Mines

HINDALCO INDUSTRIES LIMITED Samri Mines, Division, Baba Chowk At & Post - Kusmi, PIN : 497 224, Distt - Balrampur-Ramanujganj (Chhattisgarh) INDIA **REGISTERED OFFICE**

21st Floor, One International Center Tower 4, Prabhadevi, Near Prabhadevi Railway Station Senapati Bapat Marg, Mumbai 400 013 Telephone +91 22 694 7 7000 / 6947 7150 IF : +91 22 694 7 7001 / 6947 7090

Website : www.hindalco.com E-mail : hindalco@adityabirla.com Corporate Identity No. : L27020MH1958PLC011238 EC Compliance for Kudag Bauxite Mine (Mine Lease Area of 377.116 Ha), Village - Kudag, Bata, Rajendrapur, Tehsil - Kusmi, District – Balrampur-Ramanujganj, State – Chhattisgarh

M/s. Hindalco Industries Limited Compliance Period: October 2023 – March 2024

Name of the Project	:	Kudag Bauxite Mines (377.116Ha. Capacity-0.6LTPA), M/s Hindalco Industries Ltd
Environment Clearance No & date	:	J-11015/354/2007 – IA.(IIM) dated 27.07.2007
Period of compliance Report	:	1st October 2023 to 31 st March 2024

A. Specific Conditions

Condition-1: Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority.

Reply to Condition 1: The Wildlife Management plan has been prepared and approved by competent Authority vide letter no. 12/13/2967, dated 07.10.2013. The copy attached as *Annexure –A*.

Condition-2: Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ petition (Civil) No. 460 of 2004 as may be applicable to this project.

Reply to Condition 2: Noted.

Condition-3: Conservation plan for schedule I fauna (if found in the study area) shall be prepared in consultation with Wildlife Department. The company shall provide authenticated list of flora & fauna separately for core and buffer zone indicating schedule of species.

Reply to Condition 3: The Conservation plan for schedule I fauna have been prepared and approved by competent authority & submitted to ministry. The detail list of flora & fauna along with the approved conservation plan is attached as *(Annexure – B)*.

Condition-4: The mining operations shall be restricted to above ground water table and it shall not intersect ground water table. Prior approval of the Ministry and CGWA should be obtained for mining if any below water table.

Reply to Condition 4: The mining operation is restricted to well above ground water table. As per our current mining operation, ultimate depth of working is about 15 meters below. Piezometer has been installed at strategic location in the lease area to monitor the Ground water level, the average depth of which is 30-35m. The ground water table is below the depth of our mining operation Hence there is no intersection of groundwater level during course of mining operation. We undertake that no mining operation is being and will be carried out below the water table.

Condition-5: Top soil, if any shall be stacked properly with proper slope with adequate safeguards and shall not be used reclamation and rehabilitation of mined out area.

Reply to Condition 5: Top soil generated during mining operation is being concurrently spread over backfilled area to restore its original forms immediately. However, if required it will be stacked properly with proper slope and adequate safeguards.



Top Soil Spreading for Backfilling

Condition-6: Over burden shall be stacked at earmarked dump site (s) only and shall not be kept active for long period. The maximum height of the dump shall not exceed 30m, each stage shall preferably be of 10m and over all slope of the dump shall not exceed 28⁰. The mine pit area shall be reclaimed by back filling the OB in a phased manner. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests on six monthly basis.

Reply to Condition 6: As such there is no any active OB dump at present. As per approved Mining Plan, OB generated during mine operation is being utilized for concurrently back filling of the mined out area for reclamation purpose. Small old inactive OB dump has been stabilized by vegetation with suitable native species to prevent erosion and surface run off.



Old Inactive Dump Plantation

EC Compliance for Kudag Bauxite Mine (Mine Lease Area of 377.116 Ha), Village - Kudag, Bata, Rajendrapur, Tehsil - Kusmi, District – Balrampur-Ramanujganj, State – Chhattisgarh M/s. Hindalco Industries Limited Compliance Period: October 2023 – March 2024

Condition-7: Garland drains shall be constructed to arrest silt and sediment flows from soil and mineral dump. The water so collected shall be utilized for watering the mine area, roads, greens belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. Garland drain (size, gradient and length) shall be constructed for both mine pit and for waste dump and sump capacity shall be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garlands drains and desilted at regular intervals.

Reply to Condition 7: Garland drain is provided to arrest silt and sediments flows from above mentioned OB dump. At present there is no any active OB dump. Entire waste generated during mining operation is being simultaneously backfilled in the mined out pit. Old inactive OB dump has been stabilized by vegetation. Garland drains & Parapet wall of appropriate size, gradient and length have been made around the active mining pits coupled with arrester to arrest silt from runoff and drains are being maintained. The drains are regularly desilted before the monsoon. The Water so collected is being used for green belt development and in sprinkling of the Haul Road. Sump of adequate capacity is also developed.





Condition-8: The project proponent shall ensure that no natural water course shall be obstructed due to mining operation.

Reply to Condition 8: There is no natural water course inside the lease area. However, we undertake that we will not obstruct any natural water course due to mining operation.

Condition-9: Blasting operations shall be carried out only during the day time. Controlled blasting shall be practiced. The drills should be operated with drill extractors. The mitigative measures for control of ground vibrations and arrest fly rocks shall be implemented.

Reply to Condition 9: Controlled blasting is being practiced in the mine only in day time. Wet drilling Machines are being used during drilling operations. Nonel & effective blast design are used to control blast vibration and fly rocks.

EC Compliance for Kudag Bauxite Mine (Mine Lease Area of 377.116 Ha), Village - Kudag, Bata, Rajendrapur, Tehsil - Kusmi, District – Balrampur-Ramanujganj, State – Chhattisgarh M/s. Hindalco Industries Limited Compliance Period: October 2023 – March 2024

Condition-10: Plantation shall be raised in an area of 44.69 ha including green belt of adequate width by planting native species around the ML area, roads; OB dump sites etc. in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Selection of plant species shall be as per CPCB guidelines. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation.

Reply to Condition 10: We have already achieved the target area asked for plantation. However, we are continuing the plantation to restore the biodiversity. In the FY 2023-24 total 4170 nos. of saplings have been planted over an area of 1.105ha. and in total till now about 58.893ha. area has been afforested with approx. 143615 nos. of saplings.

The density is being maintained about 2500 plant per hectare with the species like Amla, Casia, mango, babul, pears & guava etc. Moreover, Ragi (Maduwa) agriculture farming has been done on over about 0.44 ha. of reclaimed area. Social forestry is also being encouraged among the local villagers. Apart from that local food grain Ragi (Maduwa) & Tau has been planted over the reclaimed area of 1.0 ha. Year wise plantation is enclosed as *Annexure-C*.



Condition-11: The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.

Reply to Condition 11: The ground water table does not intersect our mining operation because of shallow depth of mining. Piezometer has been installed at strategic location in our lease area for monitoring the ground water level, the average depth of which is 30-35m. However, Rain water harvesting structure (Ponds and Wells) has been constructed as conservation measures in mined out area for the conservation/augmentation of ground water resources.





RWH Pond & Well Structure

Condition-12: Regular water sprinkling shall be carried in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading, unloading and transfer points and other vulnerable areas. It should be ensured that the ambient air quality parameters conform to the norms prescribed by the CPCB in this regard.

Reply to Condition 12: Regular water spraying with 12 KL portable water tanker in the mine lease hold area is being carried out regularly to control air pollution. The ambient air quality is within the stipulated norms.



Condition-13: Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year-pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground Water Authority and Regional Director Central Ground Water Board.

Reply to Condition 13: Ground water quality monitoring is being carried out regularly on quarterly basis. The analysis reports are being submitted to CECB, Raipur. Regular monitoring of ground water level is being carried out by piezometer installed at strategic location-in the lease area and is found below the level of mining operation. The ground water Quality report and the GW level data is attached in *Annexure – D*.

Condition-14: Rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, CGWB.

Reply to Condition 14: Rain water harvesting ponds has been made at lease hold area.

Condition-15: Prior permission from the competent authority shall be obtained for drawl of ground water, if any.

Reply to Condition 15: Ground water NOC has been obtained from CGWA vide letter no. CGWA/NOC/MIN/REN/2/2023/7570, dated 03-04-2023 valid up to 28-04-2025 for domestic/drinking purpose. The approval copy attached as *Annexure-E*.

Condition-16: Existing ecological status of the project area shall be conserved and protected. The project proponent should take all possible precautionary measures during mining operation for conservation and protection of endangered fauna.

Reply to Condition 16: All efforts are being taken to conserve and protect existing ecological status of the project area. Important measures we are taking for conservation of flora and fauna are as follows.

a) Company have been provided solar LED torch and florescent jacket to Staff of forest department, Ambikapur for patrolling and monitoring the movement of wildlife, encroachment, cutting, poaching, fire etc.

b) Veterinary camp is being conducted for immunization of cattle with the help of block veterinary staff.

c) Awareness programme related to wildlife conservation is being conducted.

d) Eco-development activities like poultry, piggery, bee keeping etc. are being organized.

e) Controlled blasting is being carried out so as reduce vibration and noise. Such operation is being carried out in day time only and its use is minimized.

f) Plantation is regular activity.

Condition-17: Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded.

Reply to Condition 17: Regular and periodic maintenance of HEMM is being carried out for control of vehicular emission in mines area. The bauxite ore are transported in trucks with tarpaulin cover upto EUP/Railway siding. Vehicle used for transportation are having valid permit. No overloading of ores for transportation is allowed to prevent spillage of material.



EC Compliance for Kudag Bauxite Mine (Mine Lease Area of 377.116 Ha), Village - Kudag, Bata, Rajendrapur, Tehsil - Kusmi, District – Balrampur-Ramanujganj, State – Chhattisgarh M/s. Hindalco Industries Limited Compliance Period: October 2023 – March 2024

Condition-18: A comprehensive report on the details of land oustees, their socio-economic profile and action plan for their rehabilitation including formation of self-help groups who can facilitate promotion of economic opportunity for local indigenous people shall be submitted for record. **Reply to Condition 18:** A copy of report has been submitted to ministry. As a part of CSR activities, company has formed SHG group to facilitate promotion of economic opportunity to local indigenous people. As of date we have 12 No. of SHGs with 120 beneficiaries who are directly engaged in Income generation activities. Detailed latest CSR report is enclosed as *Annexure F*. **Condition-19:** The company shall implement occupational health and safety measures for the workers and engage a qualified doctor who is trained in occupational health surveillance.

Reply to Condition 19: Company has provided to all workers with personal protective equipment and training are also being imparted to them for safety & health in our Group vocational training center. One doctor having MBBS qualification has been appointed for facilitation of OHS. All employees working in the mine have been under gone through medical test as per Mines ACT-1952.



Safety Talk before execution of the Job & PME Copy

Condition-20: A Final Mine Closure Plan, along with details of Corpus Fund, shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval. **Reply to Condition 20:** We accept the condition. A progressive mine closure plan approved by IBM is in place. IBM is competent authority to approve the final mine closure plan. Based on the present resource estimate, and peak rated production capacity, the tentative balance life of mine is around 27 years. However, after completion of further detailed exploration programme and geological investigation, the balance life of mine is subject to change with respect to EC Capacity and cut –off grade of mineral at that particular time. Final mine closure mine plan along with details

M/s. Hindalco Industries Limited Compliance Period: October 2023 – March 2024

of corpus fund will be submitted within prescribed timelines in accordance with law to competent authority.

B. General Conditions

Condition-1: No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.

Reply to Condition 1: Noted.

Condition-2: No change in the calendar plan including excavation, quantum of mineral bauxite ore shall be made.

Reply to Condition 2: Calendar plan (IBM Approved Mining Plan/scheme) prepared for the mine is being followed.

Condition-3: Conservation measures for protection of flora and fauna in the core and buffer zone shall be drawn up in consultation with the local forest and wildlife department.

Reply to Condition 3: The suggestions of local forest department are being implemented for conservation of flora and fauna in and around lease hold area. Important measure being implemented for conservation of flora and fauna are as follows.

a) Company have been provided solar LED torch and florescent Jackets to Staff of forest department, Ambikapur for patrolling and monitoring the movement of wildlife, encroachment, cutting, poaching, fire etc.

b) Veterinary camp is being conducted for immunization of cattle with the help of block veterinary staff.

c) Awareness programme related to wildlife conservation is being conducted.

d) Eco-development activities like poultry, piggery, bee keeping etc. are being organized.

e) Controlled blasting is being carried out so as reduce vibration and noise. Such operation is being carried out in day time only and its use is minimized.

f) Plantation is regular activity.

Condition-4: Four ambient air quality-monitoring stations shall be established in the core zone as well as in the buffer zone for RPM, SPM, SO₂, Nox, monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.

Reply to Condition 4: Ambient Air quality monitoring is being carried out as per the guideline and is being followed. For this purpose, we have already appointed a NABL accredited laboratory M/s. Anacon Laboratories Pvt. Ltd. for conducting regular environmental monitoring. Analysis Report (from October 2023 to March 2024) is enclosed as *Annexure-G*.

Condition-5: Data on ambient air quality (RPM, SPM, SO₂, NOx) should be regularly submitted to the Ministry including its Regional office located at Bhopal and the State Pollution Control Board / Central Pollution Control Board once in six months.

Reply to Condition 5: Data of ambient air quality (RPM, SPM, SO2, and NOx) are being submitted to CECB and are being submitted to other regulatory authorities as per guidelines. Ambient air quality report for the month October 2023 to March 2024 is enclosed as *Annexure-G*. **Condition-6:** Fugitive dust emission from all the sources shall be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.

Reply to Condition 6: Fugitive dust emission from generating sources is being controlled. The dust extractor, wet drilling, regular water spraying with 12 KL portable water tanker in the mine lease hold area is being carried out regularly. Rainwater collected into the mine pit is being utilized for dust suppression purpose. Black top road has been constructed up to pit head to reduce dust

emission.



Black top access road to the mines

Condition-7: Measures shall be taken for control of noise levels below 85dBA in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with ear plugs / muffs.

Reply to Condition 7: The noise level in working area is being maintained below the prescribed limit. As protective measures, Workers engaged in operations of HEMM, etc. is being provided with ear plugs / muffs. The proper maintenance of HEMM is being carried out to control noise emission.

SI.	Month	N	ear Weigh B	ridge		Mining Are	ea
No.	WIOHUH	Min.	Max.	Avg.	Min.	Max.	Avg.
1	Oct-23	64.8	67.3	66.1	56.2	61.4	58.8
2	Nov-23	68.1	72.6	70.4	57.3	61.9	59.6
3	Dec-23	62.8	67.1	65.0	57.3	61.4	59.4
4	Jan-24	67.1	71.3	69.2	59.6	64.2	61.9
5	Feb-24	71.3	74.1	72.7	58.9	64.8	61.9
6	Mar-24	68.7	73.9	71.3	62.1	67.3	64.7

HEMM Spot Noise Level (dB(A) Leq) Monitoring

EC Compliance for Kudag Bauxite Mine (Mine Lease Area of 377.116 Ha), Village - Kudag, Bata, Rajendrapur, Tehsil - Kusmi, District – Balrampur-Ramanujganj, State – Chhattisgarh M/s. Hindalco Industries Limited Compliance Period: October 2023 – March 2024

Condition-8: Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.

Reply to Condition 8: There is no waste water generated from the mining operation. So, there is no liquid discharge from mine. A minimal quantity of waste water generated from workshop during vehicle maintenance, for which oil and grease separation pits are provided for the treatment. The treated water is being used for dust suppression in haul road.

Condition-9: Personal working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.

Reply to Condition 9: Company has provided adequate personal protective equipment to all workers and it is also ensured that they use the same. Regular awareness, training are also being imparted to them for safety & health in our Group vocational training center–Samri. All employees undergo Lung Function Tests during the Periodical Medical Examination. Periodical Medical Examination of employees and contractor workers are organized regularly to observe any contractions due to exposure to dust and other occupational hazards.

Condition-10: Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

Reply to Condition 10: Periodical and Initial medical examination of all workers are being carried out as per provision of Mines Act.

Condition-11: A separate environmental management cell with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

Reply to Condition 11: Environment cell is already in place at Samri Mines Division headed by Head (Mines) and comprises of suitable qualified persons. Constitution of Environment Management cell is enclosed in *Annexure-H*.

Condition-12: The project authorities shall inform to the Regional Office located at Bhopal regarding of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

Reply to Condition 12: The requisite documents have been submitted the to the regional office of the Ministry, Bhopal before commencement of development & operation in 1999. However, as the

EC Compliance for Kudag Bauxite Mine (Mine Lease Area of 377.116 Ha), Village - Kudag, Bata, Rajendrapur, Tehsil - Kusmi, District – Balrampur-Ramanujganj, State – Chhattisgarh M/s. Hindalco Industries Limited Compliance Period: October 2023 – March 2024

current regional office has changed to Raipur region, we are again resubmitting the information to the IRO Raipur vide letter no. HIL/SBM/MoEF&CC/1203/2024, dated 20-03-2024.

Condition-:13 The funds earmarked for environmental protection measures shall be kept in separate account and should not be diverted for other purpose. Year wise expenditure shall be reported to the Ministry and its Regional Office located at Bhopal.

Reply to Condition 13: Adequate fund provision is already earmarked for environmental protection measures and will not be diverted to other purpose. The year wise expenditure is being submitted to concern authorities as per guidelines. The copy of the detail Expenditure is attached as *Annexure-J*.

Condition-14: The project authorities shall inform to the Regional Office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development.

Reply to Condition 14: The requisite documents have been submitted the to the regional office of the Ministry, Bhopal before commencement of development & operation in 1999. However, as the current regional office has changed to Raipur region, we are again resubmitting the information to the IRO Raipur vide letter no. HIL/SBM/MoEF&CC/1203/2024, dated 20-03-2024.

Condition-15: The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/ monitoring reports.

Reply to Condition 15: All cooperation is being extended to regulatory authorities.

Condition-16: A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.

Reply to Condition 16: We have forwarded the copy of clearance letter to Gram Panchayat of Bata on 13-08-2007. The copy of same has already been submitted to your good office.

Condition-17: State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/Tehsildar's office for 30 days.

Reply to Condition 17: The copy has been displayed by CECB in Surguja Collectorate.

Condition-18: The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at http://envfor.nic and a copy of the same shall be forwarded to the Regional Office of this Ministry located Bhopal.

EC Compliance for Kudag Bauxite Mine (Mine Lease Area of 377.116 Ha), Village - Kudag, Bata, Rajendrapur, Tehsil - Kusmi, District - Balrampur-Ramanujganj, State - Chhattisgarh M/s. Hindalco Industries Limited Compliance Period: October 2023 - March 2024

Reply to Condition 18: The information regarding environment clearance has been published in two local new papers Hari Bhumi & Ambika Vani. The copy of same has been already submitted to your good office. Copy of News paper clip is enclosed in *Annexure I*.

Condition-19: The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

Reply to Condition 19: Noted.

Condition-20: Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

Reply to Condition 20: Noted.

Hope the above compliance will be found in order.

Yours truly, (For Hindalco Industries Limited)

Agent of (Sanjay Pardhi) Samn Mines Division Hindalco Industries Ltd **Agent of Mines**

Encl.: As above

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पायसिर प्रधान मुख्य वन् राख्यप (पन्थप्राणी प्रबंधन एवं जेव तिदिधता राख्यण सह मुख्य वर्तयप्राणी अभिरक्षक),छत्तीसगढ अरण्य भवन, मेरिकल कॉसेज राज रायपर

引き日 - pecfwl/assily.com

. (Ph 0771-2552228, Fax 0771-2552227)

क्रमाक/व प्रा /प्रवध-12/13/ 296 ≠

रायपुर दिनांक ८ 🖌 /10 / 2013

yfð,

संचालक, इन्वायरनमेंट क्लीयरें श सेल भारत सरकार, वन एवं पर्यावरण मंत्रालय, पर्यावरण भवन, सी.जी.ओ. काम्प्लेक्स, लोधी रोड़, नई दिल्ली–111003

विषय :--

छत्तीसगढ़ के बलरामपुर जिले (तत्कालीन सरगुजा जिला) में स्थित सामरी बॉक्साईट माईन्स, कुदाग बॉक्साईट माईन्स एक टाटीझरिया बॉक्साईट माईन्स की क्षमता बढ़ाये हेतु ईन्वायरमेंट क्लीयरेंस।

संदर्भः- 1. पर्यावरण व वन मंत्रालय, भारत सरकार का पत्र क्रमांक J-11015/353/2007-IA.II(M) दिनांक 27 जुलाई 2007.

 पर्यावरण व वन मंत्रालय, मारत संरकार का पत्र क्रमांक J-11015/337/2007-IA.II(M) दिनांक 27 जुलाई 2007.

 पर्यावरेण व वन मंत्रालय, भारत सरकार का पत्र क्रमांक J-11015/337/2007-IA.II(M) दिनांक 9 अगस्त 2007.

कृपया आपके उपरोक्त संदर्भित पत्रों का अवलोकन करने का कष्ट करें। जिसके द्वारा बलरामपुर जिले (पुराने सरगुजा जिले) के सामरी बॉक्साईट खुली खदान (1 LTPA) की क्षमता बढ़ाकर (SETPA) करने, कुदाग बॉक्साईट खदान (0.4 LTPA) की क्षमता बढ़ाकर (0.6 LTPA) करने तथा टाटीझरिया बॉक्साईट खदान (0.5 TPA) की क्षमता बढ़ाकर (4 TPA) करने के परियोजना प्रस्ताव के संबंध में वन्य प्राणी (संरक्षण) अधिनियम,1972 के तहत अनुसूची–1 के वन्यप्राणियों हेतु "वन्य प्राणी संरक्षण व प्रबंधन योजना" तैयार की जाकर इस कार्यालय की सहमति दिये जाने का लेख किया है। 1. विषयांकित परियोजना हेतु खदान के लीज के अनुबंध दिसंबर 1996 एवं जून 1998 में हस्ताक्षरित हुये थे। सामरी क्षेत्र में भारत सरकार पर्यावरण व वन मंत्रालय के आदेश क्रमांक J-11015/353/2007-IA.II/M दिनांक 27 जुलाई, 2007 द्वारा 2146.746 हे. में, कुदाग क्षेत्र में भारत सरकार पर्यावरण व वन "संत्रलाय आदेश क्रमांक J-11015/354/2007-IA.II/M दिनांक 27 जुलाई 2007 द्वारा 377.116 हे. में, संया टाटीझरिया में भारत सरकार पर्यावरण व वन मंत्रालय के आदेश क्रमांक J-11015/337/2007-IA.II/M दिनांक 9 अगस्त 2007 द्वारा 1218.762 हे. में बॉक्साईट खनन की स्वीकृति प्राप्त कर संस्था द्वारा खनन का कार्य किया जा रहा है।

2

वर्तमान प्ररताव में उपरीवत कीवता के वार्त्र के का गामरी के लिये 10 1916 में महाकर 50 1914 किया जाना, कुदाम के लिय 0 1 1916 के हा 1 1916 1914 किया जाना एवं त्यत्नेझरिया के लिय 50,000 TPA से बढाकर 4,00,000 194 किया जाना प्रस्तायित है। भारत सरकार पर्यावरण व वन मंत्रालय के द्वारा उपरोवत वृद्धि की क्या गाना प्रस्तायित है। भारत सरकार पर्यावरण व वन 1-11015/353/2007-IA.II/M दिनांक 27 जुलाई 2007 1 11015/354/2007-IA.II/M दिनांक 27 जुलाई 2007 एवं 1-11015/337/2007-IA.II/M दिनांक 9 अगरत 2007 द्वारा कुछ शर्ती के साथ दी गई है. जिसमें एक महत्वपूर्ण शर्त यह भी उल्लेखित है कि संबंधित क्षेत्र में बन्य प्राणी (संरक्षण) अधिनियम के शेड्यूल 1 के पाये जाने वाले वन्य प्राणियों के संरक्षण हेतु प्रबंध योजना तैयार की जाकर राज्य के मुख्य वन्य जीव अभिरक्षक के अभिमत सहित प्रस्तुत किया जाये। जिसके पालन में संरक्षा द्वारा एक बेल्य प्राणी संरक्षण योजना तैयार की गयी है।

खनन क्षमता बढ़ाने से संबंधित प्रस्तावित तीनों ही परियोजनाओं के एक दूसरे से 4 कि.मी. की परिधि में रिथत होने एवं सभी के बफर क्षेत्र ओवरलैपिंग होने के कारण सभी के लिये संयुक्त रुप से वन्य प्राणी संरक्षण व प्रबंधन योजना तैयार की जाकर महाप्रबंधक, (खादान), हिन्डालको इन्डस्ट्रिजि के पत्र क्रमांक HIL/SAM/300/2013 दिनाक 2.03.2013 द्वारा प्रस्तुत किया गया है जिसका समग्र रुप से परीक्षण किया गया। प्रस्तावित परियोजनाओं के कोर क्षेत्र से 10 कि.मी. की परिधि में आने वाले ओवरलैपिंग बफर क्षेत्र में वन्य प्राणियों एवं उपलब्ध वनस्पतियों का सर्वे किया जाकर पाये गये स्पेसिज को परियोजना प्रस्ताव में अनेक्स्र–4 के में उल्लेखित किया गया है।

3.

उल्लेखित सूचि में वन्य प्राणी (संरक्षण) अधिनियम के शेड्यूल 1 के वन्य प्राणी नहीं पाये गये हैं। परंतु इस कार्यालय द्वारा वन संरक्षक (वन्य प्राणी), सरगुजा से विगत दस वर्षो में वन्य प्राणियों द्वारा की गई क्षति की जानकारी चाही गयी। वन संरक्षक ने अपने पत्र क्रमांक 749 दिनांक 24.05.2012 से यह जानकारी उपलब्ध कराया है कि उक्त क्षेत्र में हाथियों का वर्ष 2005 में दो बार, वर्ष 2006 में आठ बार. 2007 में एक बार, 2008 में दो बार, 2009 में सात बार आना जाना हुआ है। इसी प्रकार मालुओं के द्वारा वर्ष 2007–08 में आठ, वर्ष 2008–09 में पॉच, वर्ष 2009–10 में छें एवं 2010–11 में 4 जनहानि व जनघायल के प्रकरण तथा वर्ष 2007–08 तथा 2008–09 में तेंदु<u>आ द्वा</u>रा पशु हानि के दो प्रकरण तथा लकड़बग्धे के कारण एक प्रकरण दर्ज किये गये है। इस प्रकार वन्य प्राणी (संरक्षण) अधिनियम के शेड्यूल 1 के उपरोक्त उल्लेखित वन्य प्राणियों के परियोजना क्षेत्र में आने जाने के प्रमाण पीये गये है। प्रस्तावित क्षेत्र से 6 से 7 कि.मी.की दूरी पर झारखंड राज्य में भेड़िया अभ्यारण्य भी स्थापित है। अतः संस्था द्वारा दस वर्षो के लिये वन्य प्राणी संरक्षण व प्रबंध योजना श्री पी. के सेन पूर्व वन्य प्राणी अभिरक्षक, झारखंड से तैयार कराया जाकर प्रस्तुत किया गया है। जिसका समय व विस्तृत अध्ययन

किया गया। प्रबंधन योजना में प्रस्तावित प्रबंधन संघधित मुख्य गतिविधियों का विवरण निम्नानुसार है। योजना में वन्य प्राणियों के लिये जलग्रहण क्षेत्र विकास, रहवास—विकास, पेयजल व्यवस्था, विभाग के क्षेत्रीय अमले के सहयोग से क्षेत्र में पेट्रोलिंग व मॉनिटरिंग, अग्नि सुरक्षा, ईको विकास की गतिविधियों, स्थानीय ग्रामीणों के लिये आजीविका, सृजन, टीकाकरण, जनजागृति कार्यक्रम जैसी गतिविधियों का

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समावेश करते हुये 04 वर्षों के लिए गरेण उत्तर कर वाफ प्रत्यानित की गयी है। जिसका क्रियान्ययन वन विभाग के द्वारा किया जायेगा। प्रस्तान मं पानर्श्वीच न के का विवरण सिन्नानुसार है –

200

48

Sr.	Works to be done	0.0		in product (Rs. In lak	hs)	Remarks
No.		1" Year	Year	Year	4"	Total	
1	Plantation including soil and moisture Conservation works as per norms of forest department surrounding the lease hold	5.00	5.00	5.00	Year 5.00	20.00	
2	Silvicultural Operation on degraded forest Land and cut back in rooted waste	2.00	2.00	2.00	2.00	8.00	
3	Habitat Management Eradication of unwanted species in buffer Zone area, Fire Protection work including wages for fire watchman, Creation of Fire line etc. surrounding lease hold and in buffer area.	2.50	2.50	2.50	2.50	10.00	
4	Monitoring - One Staff of forest department to monitor movement of wild life, encroachment, illicit cutting,poaching, fire etc. including Salary of 1 staff	3.00	3.00	3.00	3.00	12.00	
5	Construction of water holes, their maintenance and patrolling (One per Annum)	10.00	10.00	10.00	10.00	40.00	
6	Eco-development activities like poultry, piggery, bee keeping etc.	_ 5.00	5.00	5.00	5.00	20.00	
7	Vocational Training to weaker section, females, old persons and minors of the surrounding villages- in three centre in the buffer Zone of the mining lease @ 50000/- per centre.	3.00	3.00	3.00	3.00	12.00	, ,
3	Veterinary camp for immunization- of Cattle with the help of block veterinary sataff.	-2.00	2.00	2.00	2.00	8.00	
9	Awareness Programme including Signages, distribution of Pamphlets- related to wild life conservation etc.	2.50	_ 2.50	2.50	2.50	10.00	
10	Provision for conservation of Biodiversity among flora and fauna of the area & Preparation of Biodiversity register	20.00	0.00	0.00	0.00	20.00	The amount is to be deposited in the account of Biodiversity Board as this work is to be done by Bio- diversity management committees (BMC's)
			35.00	35.00	35.00	160.00	(DIVIC 3)

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ijay/Stena/1

कर के साम की लागत रहा 160.00 जाख वर्तनार के का करना के कि साम है के साथ से साह लागत कर की कि पर करें में अन्द्रेक्स के हिसाब से बृद्धि होगी। परियोजना के कि मानवान के संयथ जों भी लागत आयंगी कर परियालना महनावनों को बन बिभाग में एकमुश्त जमा करानी होगी। जिससे मृत्य वृद्धि के प्रभाव को समाप्त

किया जा रागना नगांगगाग एकमुश्त जमा की गई राशि से बन्यप्राणी सरक्षण योजना कियान्वित करेगा। 7. अनुमोदित जन्यपाली सरक्षण योजना की एक प्रति संलग्न प्रेषित है। कृपया वन्यप्राणी संरक्षण योजना में प्रावधानित राशि रू. 160.00 लाख एकमुश्त जमा कराने हेतु परियोजना प्रस्तावको को आदेशित करने का कष्ट करें।

संलग्नः--उपरोक्तान्सार।

(रामप्रकाश) २२ [७] प्रधान मुख्य वन संरक्षक (वन्यप्राणी) छत्तीसगढ़, रायपुर रायपुर दिनांक 07/10/2013

पृष्ठां क्रमांक/व.प्रा./प्रबंध–12/13/2968.
प्रतिलिपि :-

 प्रमुख सचिव, छत्तीसगढ़ शासन, वन विभाग, महानदी मंत्रालय भवन, नया रायपुर की ओर मय योजना की प्रति सहित सूचनार्थ प्रेषित।

 श्री एम., के. नायेंक, जी. एम. माइन्स हिन्डालको ईन्डस्ट्रीज लिमिटेड, सामरी बॉक्साईट माईन्स, पोस्ट-कुसमी, जिला-सरगुजा, छत्तीसगढ़ की ओर मय योजना की प्रति सहित सूचनार्थ प्रेषित।

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प्रधान मुख्य वन संरक्षक (वन्यप्राणी) टा [x [] ? छत्तीसगढ़, रायपुर

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SAMRI BAUXITE MINE

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Annexule - B

Details of Flora and Fauna

Annexure-6

समावेश करते हुये 04 वर्षों के लिप कोंग करना करना के अवधानित की गयी है। जिसका क्रियान्ययन वन विभाग के द्वारा किया जायेगा। प्रस्तान मंधान भौं का तरत का विवरण सिन्नानुराहर है –

. 1950)

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2481

98 (CC)

Sr.	Works to be done			in younds (Rs. In lak	ha)	Remarks
r‡n_		1**	Year	1 th	4.0	Total	42
1	Plantation including soil and moisture Conservation works as per norms of forest department surrounding the lease hold	Year 5.00	5:00	5.00	Year 5.00	20.00	
2	Silvicultural Operation on degraded forest Land and cut back in rooted waste	2.00	2.00	2.00	2.00	8.00	đi s
3	Habitat Management Eradication of unwanted species in buffer Zone area, Fire Protection work including wages for fire watchman, Creation of Fire line etc. surrounding lease hold and in buffer area.	2.50	2.50	2.50	2.50	10.00	no el ^c
4	Monitoring - One Staff of forest department to monitor movement of wild life, encroachment, illicit cutting,poaching, fire etc. including Salary of 1 staff	3.00	3.00	3.00	3.00	12.00	2
5	Construction of water holes, their maintenance and patrolling (One per Annum)	10.00	10.00	10.00	10.00	40.00	
6	Eco-development activities like poultry, piggery, bee keeping etc.	5.00	5.00	5.00	5.00	20.00	
7	Vocational Training to weaker section, females, old persons and minors of the surrounding villages- in three centre in the buffer Zone of the mining lease @ 50000/- per centre.	3.00	3.00	3.00	3.00	12.00	
3	Veterinary camp for immunization- of Cattle with the help of block veterinary sataff.	-2.00	2.00	2.00	2.00	8.00	
9	Awareness Programme including Signages, distribution of Pamphlets- related to wild life conservation etc.	2.50	_ 2.50	2.50	2.50	10.00	
10	Provision for conservation of Biodiversity among flora and fauna of the area & Preparation of Biodiversity register	20.00	0.00	0.00	0.00	20.00	The amount is to be deposited in the account of Biodiversity Board as this work is to be done by Bio- diversity management committees
-			200	25.00	25.00	100.00	(BMC's)
	Total	55.00	35.00	35.00	35.00	160.00	

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ANNEXURE-6 DETAILS OF FLORA & FAUNA

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TABLE-1 DETAILS OF DOMINANT PLANT SPECIES IN MINE LEASE AREA (CORE ZONE)

Name of the plant Species	Local Name	Family
Butea monosperma	Palas	Fabaceae
Acacia Arabica	Babul	Mimosaceae
Leucena leucophloe	Sabubal	Mimosacaae
Mangifera indica	Aam	Anacardiaceae
Citrus lemon	Nimbu	Rutaceae
Emblica officinalis	Amla	Euphorbiaceae
Ficus hispida	Jungli anjir	Moraceae
Spondias cythera	Kathjamun	Myrtaceae
Terminalia catapa	Badam	Combretaceae
Apluda mutica	Grass	Poaceae
Chloris dolichosta	Grass	Poaceae
Dichanthium annulatum	Grass	Poaceae
Inpurta cylendrica	Grass	• Poaceae
Themeda-quadrivalvis	Grass	Poaceae
Aristida adscensionsis	Grass	Poaceae
tragrostis bilena	Grass	Poaceae
Fragrostis tenella	Grass	esesco
Setarla glauca	Grass	Cyperaceae
Thysanolaena maxima	Grass	Graminae
Parthenium hysterophorus	Congress grass	Compositae
Cassia tota		Caesalpinaceae
Delouix regia	Kachnar	Caesalpinaceae
Dalbergia Sissoo	Sisoo	Caesalpinaceae,

TABLE-2 FLORA/VEGETATION IN STUDY AREA (BUFFER ZONE)

Sr. No.	Technical Name	Family	Life Form
I. Agricu	Iltural Crops		
1	Hordium vulgare	Poaceae	Hemicryptophyte
2	Sorghum vulgare	Poaceae	Hemicryptophyte
• 3	Triticum vulgare	' Poaceae	Hemicryptophyte
4	Zea mays	Poaceae	Hemicryptophyte
5	Oryza sativa	Poaceae	Hemicryptophyte
6	Pennisetum typhoideum	Poaceae	Hemicryptophyte
II. Com	mercial Crops (including Veget	ables)	
1	Abelomoschus indicus	Malvaceae	Therophyte
8	Alllum cepa	Liliaceae	Geophyte
9	Allium sativum	Liliaceae	Geophyte
1.0	Annona squamosa	Annonaceae	Phanerophyte
11	Arachis hypogia	Fabaceae	Geophyte
12	Catharanthes pusillus	Compositae	Therophyte
13	Cicer arietinum	Fabaceae	Hemicryptophyte
1.4	Citrus lemon	Ruataceae	Therophyte
15	Colacasia esculenta	Areaceae	Geophyte
16	Coreandrum sativum	Umbelliferae	Hemicryptophyte
17	Daucus carota	Umbelliferae	Geophyte
1.8	Lycopersicum esculentus	Solanaceae	Therophyte
1 ')	Mangifera indica	Anacardiaceae	Phanerophyte
20	Memordia charantia	Cucurbitaceae	Therophyte
21	Pisum sativum	Fabaceae	Therophyte
22	Psidium guava	Myrtaceae	Phanerophyte
23	Solanum tuberosum	Solanaceae	Geophyte
24	Litchi chinensis	Sapindaceae	Phanerophyte
III. Plant	tations		
= 25	Bauhinia cormbosa	Caesalpinaceae	Phanerophyte
26	Acacia nilotica	Mimosaceae	Phanerophyte
27	Albizia lebbeck	Mimosaceae	Phanerophyte
28	Albizia odorattissima	Mimosaceae	Phanerophyte
29	Albizia procera	Mimosaceae	Phanerophyte

		Sr. M 30	Azadirachta indica	Name	E	1
		31	Baubinia indica		Meliaceae	Life Form
		32	Bauhinia variegate		Caesalpinaceae	Phanerophyte
		33	Bauhinia purpuria		Caesalpinaceae	Phanerophyte
		34	Bambusa arundanac Butea monosperma	eae	Poaceae	Phanerophyte
		35	Butea frondosa		Caesalpinaceae	Phanerophyte
		36	Eucalyptus sp		Caesalpinaceae	Phanerophyte
		37	Delonix regia		Myrtaceae	Phanerophyte
		38	PUCODO LOURA LU		Caesalpinaceae	Phanerophyte
	II	/. Na	tural Vegetation/Forest	-	Caesalpinaceae	Phanerophyte
	-		Abrus precatorius	Type		Phanerophyte
		40	Abutilon indicum		Fabaceae	and the second s
	-	41	Acacia Arabica		Malvaceae	Therophyte
		42	Acacia auriculiformis		Mimosaceae	Phanerophyte
		43	Acacia catechu		Mimosaceae	Phanerophyte
		44	Acacia intinsia		Mimosaceae	Phanerophyte
		45	Acacia fernacea		Mimosaceae	Phanerophyte
		46	Acacia leucophloe		Mimosaceae	Phaneophyte
	-	47	Acalypha lanceolata		Mimosaceae	Phanerophyte
		18	Acanthospermum bicol	dur	Euphorbiaceae	Phanerophyte
		9	ASUYIANTINES aspera		Compositae	Inerophyte
		0	Adathoda vasica		Amaranthaceae	Therophyte
	5		Adina cordifolia		Acanthaceae	Therophyte
	5.		Aegle marmelos		Rubiaceae	Therophyte
1	5.		Aerva lanata		Rutaceae	Phanerophyte
ł			Ageratum conyzoides		Compositae	Phanerophyte
ł	55		Allanthes excela		Compositae	Phanerophyte
ŧ	57		Alangium salivus		Simaroubaceae	Therophyte
ŀ	58		Albizia odoratissima		Alangiceae	Phanerophyte
F	59		Albizia procera		Caesalpinaceae	Phanerophyte
-	60		Alstonia scholaris		Caesalpinaceae	Phanerophyte
i.	61		Alternanthera sessilis		Apocyanaceae	Phanerophyte
2	62		Alysicarous hamosus		Amaranthaceae	Phanerophyte
	63		Anogeissus latifolia		Fabaceae	Therophyte
	64		Anogeissus serica		Combretaceae	Phanerophyte
-	65	-	Argemone mexicana		Combretaceae	Phanerophyte
1	66		Azadirachta indica		Papevaraceae Meliaceae	Phanerophyte
	67		Barleria prionoites		Acanthaceae	Phanerophyte
	68	-	Bidens biternata		Compositae	Therophyte
	69	- A	Blepharis asperima		Acanthaceae	Therophyte
	70	F	Blepharis madaraspatens		Acanthaceae	Phanerophyte
	71		iunica lacera		Compositae	Therophyte
1	72	P	oerheavia chinensis		Nycatagigar	Therophyte
	73	E	oerheavia diffusa		Nycataginaceae Nyctaginaceae	Therophyte
1	74	R	ombax ceiba		Bombacaceae	Therophyte
	75	B	orreria hispida		Rubiaceae	Phanerophyte
	76	B	orreria stricta	F	Rubiaceae	Therophyte
	77	R	swellia serrata	F	Burseraceae	Therophyte
	78	Br	assica camprestris idelia retusa	0	ruciferae	Phanerophyte
	79	Br	della superba	F	uphorbiaceae	Therophyte
	30	Ca	esaloina pula	E	uphorbiaceae	Phanerophyte
8	31	Ca	esalpina pulcherima	C	aesalpinaceae	Phanerophyte
	2	Car	otropis procera	A	sclipiadaceae	Phanerophyte
8	3	Car	nthium diddynum Oparis aphylla	R	ubiaceae	Phanerophyte
	4	Car	paris apnylla paris deciduas	Ca	apparidaceae	Phanerophyte
3	5	Car	issa carandus	Ca	pparidaceae	Therophyte
36	5	Car	ssa carandus ssa spinarium	AD	ocyanaceae	Phanerophyte
1	7	Cas	earia graveolens	AD	ocyanaceae	Phanerophyte
8	3	Cass	ia absus	Sa	mydiaceae	Phanerophyte
9		Cass	la absus	Ca	esalpinaceae	Phanerophyte
0		Cass	ia auriculata	Cae	esalpinaceae	Phanerophyte
1		Case	a occidentalis	Cae	esalpinaceae	Therophyte
)		Case	a occidentalis	Cae	salpinaceae	Therophyte
3		Cestr	um diurnum	Cae	salpinaceae	Therophyte
7		Card	um noctrunum	1 Rub	iaceae	Phanerophyte
		CEST		1 11013	locede	Theophyte

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Fr. No.	Technical Name	Family	Life Form
95	Chloris varigata	Poaceae	Therophyte
96	Cissus quadrangularis	Vitaceae	Therophyte
97	Citrus limon	Rutaceae	Phanerophyte
98	Cleome gynandra	Capparidaceae	Therophyte
99	Combretum ovalifolium	Rubiaceae	Phanerophyte
100	Cordia myxa	Rubiaceae	Phanerophyte
101 .	Crotalaria medicagenia	Fabaceae	Therophyte
102	Croton bonplandinum	Amaryllidaceae	Therophyte
103	Cuscuta reflexa	Cuscutaceae	Epiphyte
104	Datura fastulosa	Solanaceae	Therophyte
105	Datura metal	Solanaceae	Therophyte
106	Desmodium triflorum	Asclepiadaceae	Therophyte
107	Diospyros melanoxylon	Lythraceae	Phanerophyte
108	Diospyros Montana	Lythraceae	Phanerophyte
109	Echinops echinatus	Compositae	Therophyte
110	Eclipta prostrate	Compositae	Hemicryptophyte
111	Emblica officinale	Euphorbiaceae	Phanerophyte
112	Emilia lajerium	Compositae	Hemicryptophyte
113	Erythrina indica	Papillionaceae	Phanerophyte
114	Euphorbia geniculata	Euphorbiaceae	Therophyte Therophyte
115	Euphorbia hirta	Euphorbiaceae	Therophyte
116	Euphorbia hyperocifolia	Euphorbiaceae	Therophyte
117	Euphorbla neruri	Euphorbiaceae	Therophyte
118	Euphorbia nivula	Euphorbiaceae	Hemicryptophyte
119	Euphorbia piluliflora	Euphorbiaceae Euphorbiaceae	Hemicryptophyte
120	Euphorbia tricauli	Convolvulaceae	Therophyte
121	Evolvulus alsinoides	Convolvulaceae	Therophyte
122	Evolvulus numalaris	Rutaceae	Phanerophyte
123	Feronia elephantum	Moraceae	Phanerophyte
124	Ficus benghalensis	Moraceae	Phanerophyte
125	Ficus carica	Moraceae	Phanerophyte
126	Ficus glomerata	Moraceae	Phanerophyte
127	Ficus hispida Ficus racemosus	Moraceae	Phanerophyte
128	Ficus relisiosa	Moraceae	Phanerophyte
129		Moraceae	Phanerophyte
130	Ficvus gibbosa Gardenia latifolia	Rubiaceae	Phanerophyte
131	Gardenia lucida	Rubiaceae	Phanerophyte
132	Garuga pinnata	Burseraceae	Phanerophyte
133	Glossocardia bosvellia	Compositae	Hemicryptophyte
134	Giossocardia Dosvenia Gmelina arborea	Rubiaceae	Phanerophyte
135	Gomphrena globosa	Amaranthaceae	Therophyte
136		Malvaceae	Therophyte
137	Gossypium herbaceum Grewia abutifolia	Tiliaceae	Phanerophyte
139	Grewla-salivifolia	Tiliaceae	Phanerophyte
139	Grewia subinaqualis	Tiliaceae	Phanerophyte
140	Gynandropis gynandra	Capparidaceae	Hemicryptophyte
141	Helictris isora	Rubiaceae	Phanerophyte
142	Heliotropium indicum	Rubiaceae	Hemicryptophyte
143	Helitropium ovalifolium	Rubiaceae	Hemicryptophyte
145	Hemidesmus indicus	Asclepiadaceae	Phanerophyte
145	Hibsicus caesus	Malvaceae	Hemicryptophyte
140	Holarrhena antidycenterica	Asclepiadaceae	Phanerophyte
147	Holostemma annularia	Aslepiadaceae	Phanerophyte
148	Hygrophylla auriculata	Acanthaceae	Hemicryptophyte
149	Hyptis suavalens	Labiatae	Therophyte
151	Ichnocarpus frutens	Poaceae	Hemicryptophyte
151	Impatiens balasamania	Balsaminaceae	Therophyte
152	Indigofera hirsute	Caesalpinaceae	Therophyte
	Indigofera limnacea	Caesalpinaceae	Therophyte
154	Indigotera limnacea Indigofera tinctoria	Caesalpinaceae	Therophyte
155	Ipomea aquatica	Convolvulaceae	Hydrophyte
156		Convolvulaceae	Therophyte
157	Ipomea coccinea	Convolvulaceae	Hemicryptophyte
158	Ipomea tuba	Rubiaceae	Phanerophyte
159	Ixora arborea	KUDIOCEOE	indiciopityte

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. No.	Technical Name	Family	Life Form
161	Ixora singapuriens	Rubiaceae	Phanerophyte
162	Jasmimum arborens	Oleaceae	Phanerophyte
163	Jatropha gossypifolia	Euphorbiaceae	Therophyte
164	Jussiaea suffraticosa	Onagraceae	Hydrophyte
165	Justia diffusa	Acanthaceae	Therophyte
166	Justicia diffusa	Acanthaceae	Therophyte
167	Lactuca punctata	Compositae	Therophyte
168	Lannea coramandalica -	Anacardiaceae	Phanerophyte
169 ·	Lannea grandis	Anacardiaceae	Phanerophyte
170	Lannea procumbens	Anacardiaceae	Therophyte
171	Lantana camara	Verbinacaee	Phanerophyte
172	Lawsonia inermis	Lythraceae	Phanerophyte
173	Lepidogathis cristata	Acanthaceae	Therophyte-
174	Leptodenia_reticulate	Asclepiadaceae	Phanerophyte
175	Leucas aspera	Labiatae	Therophyte
176	Leucas longifolia	Labiatae	Therophyte
177	Leucas longifolia	Labiatae	Therophyte
178	Leucena leucophioe	Caesalpinaceae	Phanerophyte
179	Linderbergia indica	Scrophulariaceae	Therophyte -
180	Lindernbergia indica	Scrophulariaceae	Therophyte
181	Lophophora tridinatus	Scrophulariaceae	Geophyte
182	Luffa acutangularia	Cucurbitaceae	, Therophyte
183	Lycopersicum esculentus	Solanaceae	Therophyte
184	Madhuca latifolia	Sapotaceae	Phanerophyte
185	Mallotus philippinus	Euphorbiaceae	Phanerophyte
186	Malvastrum coramandalicum	Malvaceae	Therophyte
187	Mangifera indica	Anacardiaceae	Phanerophyte
188	Marselia quadrifolia	Marseliaceae	Phanerophyte
189	Melia azadirachta	Meliaceae	Phanerophyte
190	Memordica diocea	Cucurbitaceae	Therophyte
	Merremia emerginata	Convolvulaceae	Therophyte
191 192	Michaelia champaca	Annonaceae	Phanerophyte
	Millinatonia hartensis	Bignoniaceae	Phanerophyte
193			
194	Mimosa hamata	Mimosaceae Rubiaceae	Therophyte
195	Mitragyna parviflora		Phanerophyte
196	Mollugo cerviana	Aizoaceae	Therophyte
197	Mollugo hirta	Aizoaceae	Therophyte
198	Moringa oleifera	Moringaceae	Phanerophyte
199	Morus alba	Moraceae	Phanerophyte
200	Mucuna prurita	Papillionaceae	Hemicryptophyte
201	Murraya exotica	Rutaceae	Phanerophyte
202	Murraya koenigii	Rutaceae	Phanerophyte
203	Musa paradisica	Musaceae	Therophyte
204	Nymphia sp	Magnoliaceae	Hydrophyte
205	Ocimum americanum	Labiatae	Therophyte
206	Ocimum-basillum	Labiatae	Therophyte
207	Ocimum_canum	Labiatae	Therophyte
208	Ocimum sanctum	Labiatae	Therophyte
209	Oldenlandia umbellate	Convolvulaceae	Therophyte
210	Oldenlandiua corymbosa	Rubiaceae	Therophyte
211	Oogeinia oojensis	Papillionaceae	Phanerophyte
212	Opuntia dillinii	Opuntiaceae	Therophyte
213	Opuntia elator	Cacataceae	Therophyteg
214	Oxalis corniculata	Oxalidaceae	Therophyte
215	Panicum milliria	Poaceae	Hemicryptophyte
216	Panicum notatum	Poaceae	Hemicryptophyte
217	Papaver somniferum	Papaveraceae	Hemicryptophyte
218	Parkinsonia aculata	Mimosaceae	Phanerophyte
218	Parthenium hysterophorus	Compositae	Therophyte
220	Paspalum strobilanthus	Passifloraceae	Hemicryptophyte
221	Passiflora foetida	Passifloraceae	Phanerophyte
222	Pavonia zeylanica	Malvaceae	Phanerophyte
223	Peltophorum ferrusinum	Caesalpinaceae	Phanerophyte
224	Phoenix-aculis	Palmae	Phanerophyte
225	Phyllanthes asperulatus	Euphorbiaceae	Phanerophyte
226	Phyllanthes emblica	Euphorbiaceae	Phanerophyte

Sr. No.	Technical Name	Family	Life Form
227	Phyllanthes nirurii	Euphorbiaceae	Therophyte
228	Phyllanthes reticulates	Euphorbiaceae	Therophyte
229	Physalis minima	Solanaceae	Therophyte
230	Pithocolobium dulce	Mimosaceae	Phanerophyte
231	Polyalthia longifolia	Annonaceae	Phanerophyte
232	Polygala ererptera	Polygalaceae	Therophyte
233	Pongamia pinnata	Fabaceae	Phanerophyte
234	Portulaca oleracea	Portulaccaceae	Therophyte
235	Psidium guava	Myrtaceae	Phanerophyte
236	Punica granulatum	Puniaceae	Therophyte
237	Randia dumatorum	Rubiaceae	Phanerophyte
238	Rosa indica	Rosaceae	Therophyte
239	Rosa machata	Rosaceae	Therophyte
240	Saccharum munja	Poaceae	Hemicryptophyte
241	Saccharum officinarum	Poaceae	Therophyte
242	Salmalia malabarica	Salmaliaceae	Phanerophyte
243	Sapindus emerginatus	Sapindaceae	Phanerophyte
244	Schleichera trijuga	Combretaceae	Phanerophyte
245	Scherebera sweitenoides	Sapindaceae	Phanerophyte
246	Schleichera oleosa	Sapindaceae	Phanerophyte
247	Sesamum-indicum	Pedaliaceae	Hemicryptophyte
248	Shorea robusta	Dipterocarpaceae	Phanerophyte
249	Sida orientalis	Malvaceae	Phanerophyte
250	Sida Aernanifolia	Malvaceae	Hemicryptophyte
251	Sejanum nigrum	Solanaceae	Therophyte
252	Solanum xanthocarpum	Solanaceae	Therophyte
253 254	Sterculia villosa	Tiliaceae	Therophyte
	Stereospermum chelinoides	Bignoniaceae	Phanerophyte
255	Sygyglum cumini	Myrtaceae	Phanerophyte
255	Tamarindus indica	Caesalpinaceae	Phanerophyte
	Tecomella undulate	Bignoniaceae	Therophyte
258 259	Tectona grandis Tephrosia purpuria	Verbinaceae Fabaceae	Phanreophyte
260	Terminalia bellarica	Combretaceae	Therophyte
261	Terminalia chebula	Combretaceae	Phanerophyte Phanerophyte
262	Terminalia tomentosa	Combretaceae	Fildherophyte
263	Tinospora cordifolia	Rhamnaceae	Phanerophyte
264	Tragus biflorus	Poaceae	Therophyte
265	Tribulus terrestris	Zygophyllaceae	Hemicryptophyte
266	Tridax procumbens	Compositae	Therophyte Therophyte
267	Triumferta pilosa	Tiliaceae	пеюрнусе
268	Vernonia cinera	Compositae	Therophyte
269	Vicoa indica	Compositae	Phanerophyte
270	Vitex Negundo	Verbinaceae	Phanerophyte
271	Vitex negungo	Verbinaceae	Therophyte
272	Vitex negurigo Vitis vermifera	Vitaceae	Therophyte
273	Vivevera zizanoides	Poaceae	Therophyte
274	Wrightia tomentosa	Apocyanaceae	Phanerophyte
275	Xanthium strumariumk	Compositae	Therophyte
276	Yucca gloriosa	Agavaceae	Therophyte
277	Zizyphus jujube	Rhamnaceae	Phanerophyte
278	Zizyphus mauritiana	Rhamanaceae	Phanrophyte
Grassla		I Mildinaliaceae	Trioncopityte
279	Apluda mutica	Poaceae	Hemicryptophyte
280	Chloris dolichosta	Poaceae	Hemicryptophyte
281	Cyanodactylon sp	Poaceae	Geophyte
282	Dichanthium annulatum	Poaceae	Hemicryptophyte
282	Inpurta cylendrica	Poaceae	Hemicryptophyte
284	Sachharum spontanseum	Poaceae	Hemicryptophyte
285	Themeda quadrivalvis	Poaceae	Hemicryprophyte
285	Aristida adscensionsis	Poaceae	
	Cenchrus ciliaris		Hemicryptophyte
287		Poaceae	Therophyte
288	Cenchrus setifgera	Poaceae	Therophyte
289 290	Cymbopogon jwarancusa	Cyperaceae	Hemicrptophyte
25411	Cyperus aristatus	Cyperaceae	Therophyte

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Sr. No.	Technical Name		
292	Dactylectinium annualatum	Family	Life Form
293	Digetaria bicornis	Poaceae	Therophyte
294	Digetaria Segetaria	Poaceae	Hemicryptophyte
295	Eragrostis biferia	Poaceae	Hemicryptophyte
296	Eragrostis biteria	Poaceae	Hemicryptophyte
297	Eragrostis tenella	Poaceae	Therophyte
298	Ischaemum rugosum	Poaceae	Therophyte
299	Setaria glauca	Cyperaceae	Hemicryptophyte
300	Eulaliopsis binata	Graminae	Hemicryptophyte
500	Thysanolaena maxima	Graminae	Hemicryptophyte
	Endangered plants	No endangered plant study period and alco	Hemicryptophyte species observed during from records of Botanical data of Books of Indian

TABLE-3 FAUNA AND THEIR CONSERVATION STATUS FROM MINE LEASE AREA (CORE ZONE)

Technical Name	English Name/ Local Name	Wild Life Protection Act	
		(1972) Status	
Phlacrocorax niger	Little cormorant		
Nycticorax nycticorax	Night heron	Sch-IV	
Ardeola grayii grayii	Paddy bird	Sch-I∀	
Bubulcus ibis coromandus	Cattle egret	Sch-IV	14 (A. 17) 4 (A. 17)
Eudynamys scolopacea	Indian koel	Sch-IV	
Meops philippinus philippinus	Bluetailed bee-eater	Sch-IV	
Dinopium benghalense tehminae	Malabar colder	Sch-IV	•
Acridotheres tristis tristis	Malabar golden backed Woodpecker	Sch-IV	-
Nectarinia minima	Common myna	61.00	
Passar demastia	Small sunbird	Sch-IV	
Passer domesticus indicus Butterflies	Indian house sparrow	Sch-IV	
	La contraction of the second	Sch-IV	
Hypolimnas bolina Lin.	1 Great regily		A CONTRACTOR OF THE OWNER
Euploea core Cramer	- Common crow	-	
Veptis hylas Moore	Common sailor	-	
urema hecabe Lin.	Common grass yellow	-	3.
Parantica aglea Stoll.	Glassy tiger	-	Contraction of the second s
fammals	enably uger	-	1.000
unambulus palmarum	Squirrel		
us sucrofa	Wild pig	Sch-IV	
erpestes edwardii		Sch-III	
ulpus benghalensis	Common mongoose	Sch-IV	
ystrix indica	Wild fox	Sch-II	
	Porcupine	Sch-IV	

FAUNA AND THEIR CONSERVATION STATUS IN STUDY AREA (BUFFER ZONE)

Technical Name	English Name/Local Name	
	anginen Rame/Local Name	Wild Life Protection Act
Aves		(1972)
Phlacrocorax niger	Little cormorant	
Ardea purpurea manilensis	Eastern purple heron	Sch-IV
Nycticorax nycticorax	Night heron	Sch-IV
Ardeola grayii grayii	Paddy bird	Sch-IV
Dupetor flavicollis	Black bittern	Sch-IV
Ardea alba modesta		Sch-IV
Bubulcus ibis coromandus	Large egret	Sch-IV
Milvus migrans govinda	Cattle egret	Sch-IV
Haliastur indus indus	Common pariah kite	Sch-IV
Vanellus indicus indicus	Brahminy kite	Sch-IV
Tringa hypoleucos	Redwattled lapwing	Sch-IV
Gelochelidon nilotica nilotica	Common sandpiper	Sch-IV
Eudynamys scolopacea	Gullbilled tern	Sch-IV
alcyon smyrnensis fusca	Indian koel	Sch-IV Sch-IV
leops philippinus philippinus	Indian white breasted Kingfischer	
espo primppinas primppinas	Bluetailed bee-eater	Sch-IV
		Sch-IV

Technical Name	English Name/Local Name	Wild Life Protection Act (1972)	
Coracias benghalensis indica	Southern Indian Roller	Sch-IV	-
Dinopium benghalense tehminae	Malabar golden backed Woodpecker	Sch-IV	-
Acridotheres tristis tristis	Common myna	Sch-IV	
Corvus splendens protegatus	Ceylon house crow	Sch-IV	-
Nectarinia minima	Small sunbird	Sch-IV	-
Nectarenia. zeylonica sola	Indian purple rumped sunbird	Sch-IV	-
Arachnothera longirostris Ionairostris	Little spinder hunter	Sch-IV	
Passer domesticus indicus	Indian house sparrow	Sch-IV	
Copsychus saularis ceyonensis	Southern magpie-robin		- Charles
Orthotomus sutorius	Tailor bird guzurata	Sch-IV	
Pavocristatus	Peacock	Sch-IV	
Amphibians		Part-III of Sch-I	-
Rana tigriana	Company from		4
Buto melanosticus	Common frog	Sch-IV	
	Toad	Sch-IV	-
Reptiles			
Calotes versicolor	Lizard	Sch-IV	
Calotes versicolor	Common garden lizard	Sch-IV	
Chamaleon zeylanicus	Indian chamaeleon	Sch-II	
Lycodon spp.	Wolf snake	Sch-III	
Boiga spp.	Catisnake	Sch-III	
Bangarus spp.	Krait	Sch-II	
Vaja naja	Indian cobra	Sch-III	
Vipera spp.	Russels viper	Sch-III .	
Phyton sp	Python sp	Sch-I	1
Butterfiles			1
Pachliopta hector Lin.	Crimson rose	-	1
Papilio demoleus Lin.	Lime butterfly	-	1
Graphium agamemnon Lin.	Tailed jay	-	1
lunoria almana Lin.	Peacock pansy	-	1
Typolimnas bolina Lin.	Great epofly	-	
Euploea core Cramer	Common crow	-	
Neptis hylas Moore	Common sailor	-	1
Eurema hecabe Lin.	Common grass yellow	-	1 1 1 1 1 1 1 1
Catopsilia sp.	Emigrant	-	
Mammals			1
Rattus sp.	Rat ·	Sch-IV	1
epus nigricollis	Hare	Sch-IV	
Canis auries	Jackal	Sch-III	
Presbytis entellus	Langur	Sch-II	1
Presbytis phayrei	Monkey	Sch-I	-
unambulus spp.	Squirrel	Sch-IV	1
unambulus palmarum	Squirrel	Sch-IV Sch-IV	
Sus sucrofa -	- Wild pig	Sch-III	
attus norvegicus	Field mouse	Sch-V	
attus rattus	House rat		
hinolopus spp.	Bat	Sch-V	
lipposiderus spp.	Bat	Sch-V -	
lerpestes edwardii		Sch-V	
andicota indica	Common mongoose Bandicoot	Sch-IV	
		Sch-V	
Bandicota bengalensis	Bandicoot	Sch-V	
/ulpus benghalensis	Wild fox	Sch-III	
telsurus ursinus	Bear	Sch-III	
lystrix indica	Porcupine	Sch-IV	
xis axis 🔹	Spotted deer	Sch-III	
anis lupaspallipes	Indian wolf	Part-I of Sch-I	
fellivora capensis	Indian Ratel	Part-I of Sch-I	
lephas maximas	Indian Elephant	Part-I of Sch-I	
elis chaus	Jungle cat	Part-II of sch-II	
arodoxurus hermophroiditus	Indian Small civet	Part-I of sch-I	
funtiacus muntiacus	Barking deer	Sch-III	
facaca mulata	Monkey	Part-I of Sch-I	

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HINDALCO INDUSTRIES LIMITED SAMRI MINES DIVISION

Kudag Bauxite Mines

Year	Kudag	lease	
	No. of Saplings	Area in Ha.	
1998-2017	117570	49.980	
2017-18	2960	1.220	
2018-19	2780	1.110	
2019-20	2980	1.200	
2020-21	4865	2.405	
2021-22	3270	0.354	
2022-23	5020	1.519	
2023-24	4170	1.105	
Total	143615	58.893	

Year wise /lease wise Afforestation details

(For Hindalco Industries Limited) Agent of Mines Sama Mines Division Hindalco Industries Ltd

Annexure-D

Hindalco Industrial Limited

Samri Mines Division

Ground Water Level Data April-2023 to September-2023

Kudag Mine Lease Piezometer Reading				
Date Height(m)				
April-22	31.6			
May-22	33.1			
June-22	30.0			
July-22	29.3			
August-22	27.6			
September-22	31.2			
Half Yearly Average	30.47			

For Hindalco Industries Limited



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Test Report

Test Report No. : ALPL/31052023/	2-7	and the second sec		Page 1 of 5
Issued To:-	Sample Inward No.	ALPL/22052023/ENV-125/1-GW-1	Analysis Start	23/05/2023
M/s. Hindalco Industries Ltd.,	Inward Date 22/05/2023		Analysis End	29/05/2023
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference	13562310015	Report Issue Date	31/05/2023
Disrict: Balrampur (C.G)	Reference Date	20/05/2023	Sample Category	Ground Water
Sample Name Ground Water		Among Designed and the state of		Received 250ml
Sampling Location Saraidih (Hindalco Campus)	Proventi 14/		ng Time	
	TEST	T RESULTS		L 251

S.N.	Test Parameter	Measurement Unit	Test Method	IS 105 (Drinking Wat	ment as per 00 : 2012 er Specifications) nendment No. 4	Test Result
				Acceptable Limit	Permissible Limit #	
1	Biological Testing 1. Water		and the second	S. 19		1
1	Coliform	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
2	Escherichia coli	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
П	Chemical Testing 1. Water					1.0.3011
3	Alkalinity (as CaCO ₃)	mg/l	IS 3025 (Part 23) : 1986	200	600	187
4	Ammonia (as N)	mg/l	IS 3025 (Part 34) : 1988	0.5	No relaxation	BDL (DL - 0.1)
5	Anionic surface active agents (as MBAS)	mg/l	IS 13428 : 2005 Annex K	0.2	1.0	BDL (DL -0.01)
6	Colour	Hazen units	IS 3025 (Part 4) : 2021	5	15	1
7	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1986	0.05	No relaxation	BDL (DL - 0.005)
8	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	1000	28.46
9	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	47.29
10	Chloramines (as Cl ₂)	mg/l	1S 3025 (Part 26) : 2021	4.0	No relaxation	BDL (DL - 0.1)
11	Free residual chlorine	mg/l	IS 3025 (Part 26) : 2021	Min. 0.2	1	BDL $(DL = 0.1)$ BDL $(DL = 0.1)$
12	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.21
13	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	13.58
14	Nitrate (as NO ₃)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL (DL - 2)
15	Odour		IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
16	pH		IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.21 at 25°C
17	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	IS 3025 (Part 43) : 1992	0.001	0.002	BDL (DL - 0.001)
18	Sulphate (as SO ₄)	mg/l	IS 3025 (Part 24) : 2022	200	400	21.46
19	Sulphide (as H ₂ S)	mg/l	IS 3025 (Part 29) : 1986	0.05	No relaxation	BDL (DL - 0.03)
20	Taste	-	IS 3025 (Part 8) : 1984	Agreeable	Agreeable	Agreeable
21	Total dissolved solids	mg/l	1S 3025 (Part 16) : 2023	500	2000	462
22	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.6
23	Total hardness (as CaCO ₃)	mg/l	IS 3025 (Part 21) : 2009	200	600	174.00
24	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BDL (DL - 0.1)

Please refer last Page for Note and Remarks.

Verified By

Snehal Raut Deputy Technical Manager

Yogesh Kombe Deputy Technical Manager

Authorized Signatories

Pooja Kathane Technical Manager

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Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

Test Report No. : ALPL/31052023/				Page 2 of 5
Issued To:-	Sample Inward No.	ALPL/22052023/ENV-125/1-GW-1	Analysis Start	23/05/2023
M/s. Hindalco Industries Ltd.,	Inward Date 22/05/2023		Analysis End	29/05/2023
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference	13562310015	Report Issue Date	31/05/2023
Disrict: Balrampur (C.G)	Reference Date	20/05/2023	Sample Category	Ground Water
Sample Name Ground Water	Sample Collected By Anacon Representative Mr. Kailash Chahande Sample Source Sampling Date Borewell Water 18/05/2023		Quantity 5 L & 2	
Sampling Location Saraidih (Hindalco Campus)			Sampling Time 12.40 pm	
	TEST	FRESULTS	4	

S.N.	l lest parameter	Measurement Unit	Tost Mathod		Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4	
				Acceptable Limit	Permissible Limit #	
п	Chemical Testing 2. Residues In Water			6.		
25	Arsenic (as As)	mg/l	IS 3025 (Part 37): 2022	0.01	No relaxation	BDL (DL - 0.01)
26	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL (DL - 0.01)
27	Barium (as Ba)	mg/l	IS 3025 (Part 2) : 2019	0.7	No relaxation	BDL (DL - 0.01)
28	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
29	Copper (as Cu)	mg/l	1S 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
30	Cadmium (as Cd)	mg/l	IS 3025 (Part 2): 2019	0.003	No relaxation	BDL (DL - 0.001)
31	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.24
32	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
33	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL $- 0.05$)
34	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.0005)
35	Molybdenum (as Mo)	mg/l	IS 3025 (Part 2) : 2019	0.07	No relaxation	BDL (DL - 0.003)
36	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
37	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
38	Silver (as Ag)	mg/l	IS 13428 (Annex J): 2005	0.1	No relaxation	BDL (DL - 0.001) BDL (DL - 0.001)
39	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.001) BDL (DL - 0.03)
40	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.03) BDL (DL - 0.1)

Please refer last Page for Note and Remarks.

Verified By

Mangesh Fande Technical Manager

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Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

Test Report No. : ALPL/31052023/	2-7			Page 3 of 5
Issued To:-	Sample Inward No.	ALPL/22052023/ENV-125/1-GW-1	Analysis Start	23/05/2023
M/s. Hindalco Industries Ltd.,	Inward Date	22/05/2023	Analysis End	29/05/2023
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference	13562310015	Report Issue Date	31/05/2023
Disrict: Balrampur (C.G)	Reference Date	20/05/2023	Sample Category	Ground Water
Sample Name Ground Water	5 T	ole Collected By tative Mr. Kailash Chahande	Quantity 5 L &	
Sampling Location Saraidih (Hindalco Campus)			ng Time	
	TES	T RESULTS		Table 1

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result		
				Acceptable Limit	Permissible Limit #			
п	Chemical Testing 2. Residues In Water			6.5				
41	Polychlorinated biphenyls			and the second second				
	2,2',5-trichlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018	1	r	BDL (DL - 0.03		
	2,4,4'-trichlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018	1		BDL (DL $- 0.03$ BDL (DL $- 0.03$		
	2,2',5,5'-tetrachlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018	1		BDL (DL - 0.0)		
	2,2',4,5,5'-pentachlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018	0.5	No relaxation	BDL (DL $- 0.03$ BDL (DL $- 0.03$		
	2,2',3,4,4',5'-hexachlorobiphenyl	μg/1	ANtr/7.2/RES/04: 2018	1 0.0	0.5 No relaxation	BDL (DL $- 0.02$ BDL (DL $- 0.02$		
	2,2',4,4',5,5'-hexachlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018	1		BDL (DL $- 0.0.$		
	2,2',3,4,4',5,5'-heptachlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018	1		BDL (DL $- 0.0.$		
42	Polynuclear aromatic hydrocarbons BDL (DL - 0.03)							
	Naphthalene	μg/l	ANtr/7.2/RES/03: 2018		BDL (DL - 0.03			
	Acenaphthylene	µg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.0)		
	Acenaphthene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL = 0.0) BDL (DL = 0.0)		
	Fluorene	μg/l	ANtr/7.2/RES/03: 2018	1		BDL (DL - 0.0.		
	Anthracene	μg/l	ANtr/7.2/RES/03: 2018	1		BDL (DL = 0.0)		
	Phenanthrene	μg/l	ANtr/7.2/RES/03: 2018	1		BDL (DL - 0.0)		
	Fluoranthene	μg/l	ANtr/7.2/RES/03: 2018	1		BDL (DL - 0.03		
	Pyrene	μg/l	ANtr/7.2/RES/03: 2018	1		BDL (DL - 0.03		
	Benzo(a)anthracene	μg/1	ANtr/7.2/RES/03: 2018	0.1	No relaxation	BDL (DL - 0.03		
	Chrysene	μg/l	ANtr/7.2/RES/03: 2018	1		BDL (DL - 0.03		
	Benzo(a)pyrene	μg/l	ANtr/7.2/RES/03: 2018	1		BDL (DL - 0.03		
	Benzo(b)fluoranthene	μg/l	ANtr/7.2/RES/03: 2018	1		BDL (DL - 0.03		
	Benzo(k)fluoranthene	μg/l	ANtr/7.2/RES/03: 2018	1		BDL (DL - 0.03		
	Indeno(123,cd)pyrene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		
	Dibenzo(a,h)anthracene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		
	Benzo(ghi)perylene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		

Please refer last Page for Note and Remarks.

Verified By

Yogesh Kombe Deputy Technical Manager

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Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

Test Report No. : ALPL/31052023/2	-7	and shall the second		Page 4 of 5
Issued To:-	Sample Inward No.	ALPL/22052023/ENV-125/1-GW-1	Analysis Start	23/05/2023
M/s. Hindalco Industries Ltd.,	Inward Date 22/05/2023		Analysis End	29/05/2023
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference	13562310015	Report Issue Date	31/05/2023
Disrict: Balrampur (C.G)	Reference Date 20/05/2023		Sample Category Ground	
Sample Name Ground Water		ble Collected By tative Mr. Kailash Chahande	Quantity 5 L &	
Sampling Location Saraidih (Hindalco Campus)	Sample SourceSampling DateSamplingBorewell Water18/05/202312.40		ng Time	
	TES	T RESULTS	1	

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result	
43	Trihalomethanes			Acceptable Limit	Permissible Limit #		
i	Bromoform	mg/l		0,1	No relaxation	BDL (DL -0.05)	
ii	Dibromochloromethane	mg/l		0.1	No relaxation	BDL (DL -0.05)	
iii	Bromodichloromethane	mg/l	ANtr/7.2/RES/05: 2018	0.06	No relaxation	BDL (DL -0.05)	
iv	Chloroform	mg/l	ann a seo realbhrail	0.2	No relaxation	BDL (DL -0.05)	
44	Pesticide Residues Organochlo			0.2	INO relaxation	BDL (DL -0.03)	
i	Alpha-HCH	μg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BDL (DL - 0.01)	
ii	Beta HCH	μg/1	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)	
iii	Gamma - HCH (Lindane)	μg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)	
iv	Delta- HCH	μg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)	
v	Alachlor	µg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BDL (DL - 0.03)	
vi	Aldrin	μg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)	
vii	Dieldrin	μg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)	
viii	Butachlor	μg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	BDL (DL - 0.03)	
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
x	o,p'-DDE	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
xi	p,p'-DDD	μg/1	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
xii	o,p'-DDD	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
xiii	o,p'- DDT	μg/1	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
xiv	p,p'- DDT	μg/1	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
xv	Endosulphan	ALC: NO			•	1 ==== (=== 0.00)	
	Alpha-Endosulphan						
	Beta-Endosulphan Endosulphan sulphate	μg/l	ANtr/7.2/RES/01: 2018	0.4	No relaxation	BDL (DL - 0.03)	

Delease refer last Page for Note and Remarks.

Verified By

Yogesh Kombe Deputy Technical Manager

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Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

Test Report No. : ALPL/31052023/2	-7			Page 5 of 5
Issued To:-	Sample Inward No.	ALPL/22052023/ENV-125/1-GW-1	Analysis Start	23/05/2023
M/s. Hindalco Industries Ltd.,	Village, P.O. Dumarkholi, Reference 13562310015		Analysis End	29/05/2023
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),			Report Issue Date	31/05/2023
Disrict: Balrampur (C.G)	Reference Date	20/05/2023	Sample Category	Ground Water
Sample Name Ground Water		ole Collected By tative Mr. Kailash Chahande		Received 250ml
Sampling Location Saraidih (Hindalco Campus)			Sampling Time 12.40 pm	
	TES	T RESULTS	and and a second	

S.N.	Test Parameter	Measurement Unit	Test Method	Requirer IS 105 (Drinking Wat Including An	Test Result					
				Acceptable Limit	Permissible Limit #					
44	Pesticide Residues Organophosphorus									
xvi	2,4-Dichlorophenoxyacetic acid	μg/l	ANtr/7.2/RES/02:2018	30	No relaxation	BDL (DL - 0.03)				
xvii	Monocrotophos	μg/l	ANtr/7.2/RES/02:2018		No relaxation	BDL (DL - 0.03)				
xviii	Atrazine	μg/l	ANtr/7.2/RES/02:2018	2	No relaxation	BDL (DL - 0.03)				
xix	Parathion methyl	μg/l	ANtr/7.2/RES/02:2018	0.3	No relaxation	BDL (DL - 0.03)				
XX	Paraoxon methyl	μg/l	ANtr/7.2/RES/02:2018	()		BDL (DL - 0.03)				
xxi	Isoproturon	μg/l	ANtr/7.2/RES/02:2018	9	No relaxation	BDL (DL - 0.03)				
xxii	Malathion	μg/l	ANtr/7.2/RES/02:2018	190	No relaxation	BDL (DL - 0.03)				
xxiii	Malaoxon	μg/l	ANtr/7.2/RES/02:2018	14	-	BDL (DL - 0.03)				
xxiv	Ethion	μg/1	ANtr/7.2/RES/02:2018	3	No relaxation	BDL (DL - 0.03)				
XXV	Chlorpyrifos	μg/l	ANtr/7.2/RES/02:2018	30	No relaxation	BDL (DL - 0.03)				
xxvi	Phorate		ANtr/7.2/RES/02 : 2018	2	No relaxation					
	Phorate-sulfone	μg/l				BDL (DL - 0.03)				
	Phorate-sulfoxide					555 (55 - 0.05)				

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • #Permissible limit in absence of an alternate source for drinking water. • 'mg/l' is equivalent to 'ppm'. • 'µg/l' is equivalent to 'ppb'. • BDL- Below detection limit. • DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. • Result for test no. 11 is not relevant. • ANgr RES-: Inhouse validated method.

REMARKS: As requested by the client, sample was tested for above parameters only. Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

Yogesh Kombe Deputy Technical Manager

-----END OF REPORT-----

Authorized Signatory

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Dr. (Mrs.) S.D. Garway Quality Manager





Anacon Laboratories Pvt. Ltd. Nagpur Lab

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Test Report

_	t Report No. : ALPL/31052023/	Sample Inward N		L/22052023/EN	V-125/2-GW-2	Analysis Start	Page 1 of 5 23/05/2023	
	CELES COLEM	Inward Date		5/2023	120/2 011 2	Analysis End	29/05/2023	
	. Hindalco Industries Ltd.,	Inward Date	22/0	5/2025				
Kud	ag Village, P.O. Dumarkholi,	Reference	13562	310015		Report Issue	31/05/2023	
Tehs	sil Samri (Kusmi),					Date		
	ict: Balrampur (C.G)	Reference Date	20/0	5/2023		Sample Category Ground Water		
DISI			Sample Col	lastad Pr		0	p	
	Sample Name		1367 (16 4 7.5 (20) = 760 - 7	Contraction of the second second		Quantity		
	Ground Water	Anacon Repr	esentative l			5 L &	250ml	
	Sampling Location	Sample Son	urce	Sampli	ing Date	Samplin Samplin	ng Time	
	Kudag Village	Borewell W	ater	18/05	5/2023	1.20	pm	
	0 0	and the second sec	TEST RES				r	
		The second second				rement as per	1	
						0500 : 2012		
S.N.	Test Parameter	Measurement Unit	Test			ater Specifications) Amendment No. 4	Test Result	
		Curt			Acceptable Li	Permissible	-	
1	Biological Testing 1. Water	How a subscript		- CA	. · · · · · · · · · · · · · · · · · · ·			
1	Coliform	Per 100 ml		85 : 2016	Absent	Absent	Absent	
2	Escherichia coli	Per 100 ml	IS 151	85:2016	Absent	Absent	Absent	
Ш	Chemical Testing 1. Water							
3	Alkalinity (as CaCO ₃)	mg/l		art 23) : 1986	200	600	164.82	
4 5	Ammonia (as N)	mg/l		art 34) : 1988	0.5	No relaxation	BDL (DL - 0.1)	
6	Anionic surface active agents (as MBAS Colour	5) mg/l Hazen units		2005 Annex K Part 4) : 2021	5	1.0	BDL (DL - 0.01	
7	Cyanide (as CN)	mg/l		art 27) : 1986	0.05	No relaxation	BDL (DL - 0.005	
8	Chloride (as Cl)	mg/l		art 32) :1988	250	1000	26.43	
9	Calcium (as Ca)	mg/l	and the second sec	art 40) : 1991	75	200	47.91	
10	Chloramines (as Cl ₂)	mg/l	IS 3025 (P	art 26) : 2021	4.0	No relaxation	BDL (DL - 0.1)	
11	Free residual chlorine	mg/l		art 26) : 2021	Min. 0.2	1	BDL (DL - 0.1)	
12	Fluoride (as F)	mg/l		art 60) : 2008	1.0	1.5	0.16	
13	Magnesium (as Mg)	mg/l		art 46) : 1994	30	100	11.94	
14	Nitrate (as NO ₃) Odour	mg/l		3 rd Edition (art 5) : 2018	45	No relaxation	BDL (DL – 2)	
16	pH			art 11) : 2022	Agreeable 6.5 to 8.5	Agreeable No relaxation	Agreeable 7.94 at 25°C	
17	Phenolic compounds (as C ₆ H ₅ OH)	mg/l		art 43): 1992	0.001	0.002	BDL (DL - 0.001	
18	Sulphate (as SO ₄)	mg/l		art 24) : 2022	200	400	18.73	
19	Sulphide (as H ₂ S)	mg/l		art 29) : 1986	0.05	No relaxation	BDL (DL - 0.03	
20	Taste			Part 8): 1984	Agreeable	Agreeable	Agreeable	
21	Total dissolved solids	mg/l	IS 3025 (Pa	art 16) : 2023	500	2000	451	
22	Turbidity	NTU	and the second se	art 10) : 1984	1	5	0.4	
23	Total hardness (as CaCO ₃)	mg/l	and the second se	art 21) : 2009	200	600	168.81	
24	Mineral Oil	mg/l	ANtr/7.	2/RES/06	1	No relaxation	BDL (DL - 0.1)	

Delease refer last Page for Note and Remarks.

Snehal Raut

Deputy Technical Manager

Verified By

Yogesh Kombe

Deputy Technical Manager

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Pooja Kathane

Technical Manager

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Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

Test Report No. : ALPL/31052023/	2-8			Page 2 of 5
Issued To:-	Sample Inward No.	ALPL/22052023/ENV-125/2-GW-2	Analysis Start	23/05/2023
M/s. Hindalco Industries Ltd.,	Inward Date	22/05/2023	Analysis End	29/05/2023
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference 13562310015		Report Issue Date	31/05/2023
Disrict: Balrampur (C.G)	Reference Date	20/05/2023	Sample Category	Ground Water
Sample Name Ground Water	Sample Collected By Anacon Representative Mr. Kailash Chahande		Quantity Received 5 L & 250ml	
Sampling Location Kudag Village	Sample Source Borewell Water	Sampling Date 18/05/2023	Sampling Time 1.20 pm	
	TES	T RESULTS	1	

S.N.	Test Parameter	Measurement Unit	Test Method	Require IS 105 (Drinking Wat Including Ar	Test Result	
				Acceptable Limit	Permissible Limit #	
п	Chemical Testing 2. Residues In Water			SO -		
25	Arsenic (as As)	mg/l	IS 3025 (Part 37): 2022	0.01	No relaxation	BDL (DL - 0.01)
26	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL (DL - 0.01)
27	Barium (as Ba)	mg/l	IS 3025 (Part 2): 2019	0.7	No relaxation	BDL (DL - 0.01)
28	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
29	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
30	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
31	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.16
32	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
33	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
34	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.0005)
35	Molybdenum (as Mo)	mg/l	IS 3025 (Part 2) : 2019	0.07	No relaxation	BDL (DL - 0.01)
36	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
37	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL- 0.001)
38	Silver (as Ag)	mg/l	IS 13428 (Annex J): 2005	0.1	No relaxation	BDL (DL - 0.001)
39	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
40	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)

Delease refer last Page for Note and Remarks.

Verified By

Mangesh Fande Technical Manager

Authorized Signatory

Gamp

Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

Test Report No. : ALPL/31052023/	2-8			Page 3 of 5
Issued To:-	Sample Inward No.	ALPL/22052023/ENV-125/2-GW	-2 Analysis Start	23/05/2023
M/s. Hindalco Industries Ltd.,	Inward Date	22/05/2023	Analysis End	29/05/2023
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference 13562310015		Report Issue Date	31/05/2023
Disrict: Balrampur (C.G)	Reference Date	20/05/2023	Sample Category Ground Wa	
Sample Name Ground Water	Sample Collected By Anacon Representative Mr. Kailash Chal		Quantity Received 5 L & 250ml	
Sampling Location Kudag Village	Sample Source Borewell Water	Sampling Date 18/05/2023	Sampling Time 1.20 pm	
	TES	T RESULTS	B	

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result		
				Acceptable Limit	Permissible Limit #			
п	Chemical Testing 2. Residues In Water			63 - C				
41	Polychlorinated biphenyls	the second second						
	2,2',5-trichlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018			BDL (DL - 0.03)		
	2,4,4'-trichlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018			BDL (DL - 0.03)		
	2,2',5,5'-tetrachlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018		No relaxation	BDL (DL - 0.03)		
	2,2',4,5,5'-pentachlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018	0.5		BDL (DL - 0.03)		
	2,2',3,4,4',5'-hexachlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018			BDL (DL - 0.03)		
	2,2',4,4',5,5'-hexachlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018			BDL (DL - 0.03)		
	2,2',3,4,4',5,5'-heptachlorobiphenyl	μg/l	ANtr/7.2/RES/04: 2018			BDL (DL - 0.03)		
42	Polynuclear aromatic hydrocarbons							
	Naphthalene	μg/l	ANtr/7.2/RES/03: 2018		0.1 No relaxation	BDL (DL - 0.03)		
	Acenaphthylene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03)		
	Acenaphthene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03)		
	Fluorene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03)		
	Anthracene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		
	Phenanthrene	μg/l	ANtr/7.2/RES/03: 2018]		BDL (DL - 0.03		
	Fluoranthene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		
	Pyrene	μg/l	ANtr/7.2/RES/03: 2018	0.1		BDL (DL - 0.03		
	Benzo(a)anthracene	μg/l	ANtr/7.2/RES/03: 2018		Norciaxation	BDL (DL - 0.03		
	Chrysene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		
	Benzo(a)pyrene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		
	Benzo(b)fluoranthene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		
	Benzo(k)fluoranthene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03)		
	Indeno(123,cd)pyrene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		
	Dibenzo(a,h)anthracene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03		
	Benzo(ghi)perylene	μg/l	ANtr/7.2/RES/03: 2018			BDL (DL - 0.03)		

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Verified By

Yogesh Kombe

Deputy Technical Manager

Authorized Signatory

Tang

Dr. (Mrs.) S.D. Garway Quality Manager




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Test Report

Test Report No. : ALPL/31052023/	2-8			Page 4 of 5	
Issued To:-	Sample Inward No.	ALPL/22052023/ENV-125/2-GW-2	Analysis Start	23/05/2023	
M/s. Hindalco Industries Ltd.,	Inward Date 22/05/2023		Analysis End	29/05/2023	
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference	eference 13562310015		31/05/2023	
Disrict: Balrampur (C.G)	Reference Date 20/05/2023		Sample Category	Ground Wate	
Sample Name Ground Water	Contraction of the second	ole Collected By tative Mr. Kailash Chahande	Quantity 5 L & 2		
Sampling Location Kudag Village	Sample Source Borewell Water			pling Time 1.20 pm	
	TES	T RESULTS	1		

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result	
				Acceptable Limit	Permissible Limit #		
43	Trihalomethanes				·	1	
i	Bromoform	mg/l		0.1	No relaxation	BDL (DL -0.05)	
ii	Dibromochloromethane	mg/l	ANtr/7.2/RES/05: 2018	0.1	No relaxation	BDL (DL -0.05)	
iii	Bromodichloromethane	mg/l	Alful 7.2/1020/05. 2010	0.06	No relaxation	BDL (DL -0.05)	
iv	Chloroform	mg/l		0.2	No relaxation	BDL (DL -0.05)	
44	Pesticide Residues Organochlo	orine					
i	Alpha-HCH	μg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BDL (DL - 0.01)	
ii	Beta HCH	μg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)	
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)	
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)	
v	Alachlor	μg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BDL (DL - 0.03)	
vi	Aldrin	μg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)	
vii	Dieldrin	μg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)	
viii	Butachlor	μg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	BDL (DL - 0.03)	
ix	p,p'-DDE	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
X	o,p'-DDE	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
xii	o,p'-DDD	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
xiii	o,p'- DDT	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
xiv	p,p'- DDT	μg/1	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)	
XV	Endosulphan						
	Alpha-Endosulphan	1 A.				New York	
	Beta-Endosulphan	μg/l	ANtr/7.2/RES/01: 2018	0.4	No relaxation	BDL (DL - 0.03)	
	Endosulphan sulphate	1455400	2000 Complexity of the Sciences and Complexity of Complexi	5000000			

D Please refer last Page for Note and Remarks.

Verified By

¥ogesh Kombe Deputy Technical Manager

Authorized Signatory

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Dr. (Mrs.) S.D. Garway Quality Manager



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Test Report

Test Report No. : ALPL/31052023/2	8			Page 5 of 5	
Issued To:-	Sample Inward No.	ALPL/22052023/ENV-125/2-GW-2	Analysis Start	23/05/2023	
M/s. Hindalco Industries Ltd.,	Inward Date 22/05/2023		Analysis End	29/05/2023	
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference	ce 13562310015		31/05/2023	
Disrict: Balrampur (C.G)	Reference Date 20/05/2023		Sample Category	Ground Water	
Sample Name Ground Water		ole Collected By tative Mr. Kailash Chahande	Quantity 5 L &	Received 250ml	
Sampling Location Kudag Village	Sample Source Borewell Water		Sampling Time 1.20 pm		
	TES	T RESULTS	A.		

Requirement as per IS 10500 : 2012 Measurement S.N. **Test Parameter Test Method** (Drinking Water Specifications) **Test Result** Unit **Including Amendment No. 4** Acceptable Limit | Permissible Limit # Pesticide Residues Organophosphorus 44 2,4-Dichlorophenoxyacetic acid ANtr/7.2/RES/02:2018 30 BDL (DL - 0.03) xvi µg/l No relaxation xvii Monocrotophos µg/l ANtr/7.2/RES/02:2018 No relaxation BDL (DL - 0.03) 1 xviii Atrazine µg/1 ANtr/7.2/RES/02:2018 2 No relaxation BDL (DL - 0.03) xix Parathion methyl µg/1 ANtr/7.2/RES/02:2018 0.3 No relaxation BDL (DL - 0.03) Paraoxon methyl µg/l ANtr/7.2/RES/02:2018 BDL (DL - 0.03) XX ANtr/7.2/RES/02:2018 Isoproturon $\mu g/l$ 0 No relaxation BDL (DL - 0.03) xxi ANtr/7.2/RES/02:2018 xxii Malathion µg/l 190 No relaxation BDL (DL - 0.03) ANtr/7.2/RES/02:2018 xxiii Malaoxon µg/l BDL (DL - 0.03) ANtr/7.2/RES/02:2018 3 xxiv Ethion µg/l No relaxation BDL (DL - 0.03) ANtr/7.2/RES/02:2018 Chlorpyrifos 30 No relaxation BDL (DL - 0.03) XXV $\mu g/l$ Phorate xxvi ANtr/7.2/RES/02:2018 2 Phorate-sulfone µg/l No relaxation BDL (DL - 0.03) Phorate-sulfoxide

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • #Permissible limit in absence of an alternate source for dinking water. • 'mg/l' is equivalent to 'ppm'. • 'µg/l' is equivalent to 'ppb'. • BDL- Below detection limit. • DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. • Result for test no. 11 is not relevant. • ANqr RES-: Inhouse validated method.

REMARKS: As requested by the client, sample was tested for above parameters only. Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

Yogesh Kombe Deputy Technical Manager

-----END OF REPORT-----

Authorized Signatory

Dr. (Mrs.) S.D. Garway Quality Manager



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Test Report

Test Report No. : ALPL/30092023/ Issued To:-	1				Page 1 of 5
A REPORT OF THE SECTOR	Sample Inward No.		2023/ENV-219/1-GW-1	Analysis Start	21/09/2023
M/s. Hindalco Industries Ltd.,			Analysis End	25/09/2023	
Kudag Village, P.O. Dumarkholi,	Reference	nce 13562310015		Report Issue	30/09/2023
Tehsil Samri (Kusmi),				Date	
Disrict: Balrampur (C.G)	Reference Date	ference Date 20/05/2023		Sample Category	Ground Water
Sample Name	Sample Collected By		By	Quantity Received	
Ground Water	Anacon Represent	tative Mr. Kai	Mr. Kailash Chahande 5 L &		
Sampling Location	Sample Source			Sampling Time	
Saraidih (Uindalae Cara)		12/09/2023	12.20 pm		

S.N.	Test Parameter	Measurement Unit	Test Method	IS 105 (Drinking Wat	ment as per 600 : 2012 ter Specifications) nendment No. 4	Test Result
	Did to the state of the			Acceptable Limit	Permissible Limit #	
	Biological Testing 1. Water					
1	Coliform	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
2	Escherichia coli	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
П	Chemical Testing 1. Water					Trosent
3	Alkalinity (as CaCO ₃)	mg/l	IS 3025 (Part 23) : 1986	200	600	194
4	Ammonia (as N)	mg/l	IS 3025 (Part 34) : 1988	0.5	No relaxation	BDL (DL - 0.1)
5	Anionic surface active agents (as MBAS)	mg/l	IS 13428 : 2005 Annex K	0.2	1.0	BDL(DL = 0.1) BDL(DL = 0.01)
6	Colour	Hazen units	IS 3025 (Part 4) : 2021	5	15	$\frac{DDL(DL-0.01)}{1}$
7	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1986	0.05	No relaxation	BDL (DL - 0.005)
8	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	1000	27.16
9	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	48.19
10	Chloramines (as Cl ₂)	mg/l	IS 3025 (Part 26) : 2021	4.0	No relaxation	BDL (DL - 0.1)
11	Free residual chlorine	mg/l	IS 3025 (Part 26) : 2021	Min. 0.2	1	and the second se
12	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	BDL (DL - 0.1) 0.27
13	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	1.5	
14	Nitrate (as NO ₃)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	14.31
15	Odour		IS 3025 (Part 5) : 2018	Agreeable		BDL (DL - 2)
16	pH		IS 3025 (Part 11) : 2022	6.5 to 8.5	Agreeable	Agreeable
17	Phenolic compounds (as C ₆ H ₃ OH)	mg/l	IS 3025 (Part 43) : 1992	0.001	No relaxation	7.94 at 25°C
18	Sulphate (as SO ₄)	mg/l	IS 3025 (Part 24) : 2022	200	0.002	BDL (DL - 0.001)
19	Sulphide (as H ₂ S)	mg/l	IS 3025 (Part 29) : 1986	0.05	400	23.86
20	Taste	-	IS 3025 (Part 8) : 1986		No relaxation	BDL (DL - 0.03)
21	Total dissolved solids	mg/l	IS 3025 (Part 8) : 1984 IS 3025 (Part 16) : 2023	Agreeable	Agreeable	Agreeable
22	Turbidity	NTU	IS 3025 (Part 10) : 1984	500	2000	452
23	Total hardness (as CaCO ₃)	mg/l	IS 3025 (Part 21) : 2009	1	5	0.4
24	Mineral Oil	mg/l	ANtr/7.2/RES/06	200	600	179.24
DI	ase refer last Page for Note and Dom		AINU/ 1.2/KES/06	1	No relaxation	BDL (DL - 0.1)

Please refer last Page for Note and Remarks.

Verified By

Snehal Raut Deputy Technical Manager

Radha Pawar Chemist

Authorized Signatories

Pooja Kathane Technical Manager

Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

Test Report No. : ALPL/30092023/ Issued To:-	T	AT DE IROOM			Page 2 of 5
M/s. Hindalco Industries Ltd.,	Sample Inward No.	ALPL/20092023/ENV-219/1-GW-1		Analysis Start	21/09/2023
			Analysis End	25/09/2023	
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference	ference 13562310015		Report Issue Date	30/09/2023
Disrict: Balrampur (C.G)	Reference Date 20/05/2023		Sample Category	Ground Water	
Sample Name Ground Water				Quantity I	Received
Sampling Location Saraidih (Hindalco Campus)			5 L & 250ml Sampling Time 12.20 pm		

S.N.	Test Parameter	Measurement Unit	Test Method	IS 105 (Drinking Wa	ment as per 500 : 2012 ter Specifications) mendment No. 4	Test Result
				Acceptable Limit	Permissible Limit #	1
п	Chemical Testing 2. Residues In Water				Linin #	
25	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No solout'	DDI (DI A AL
26	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation 0.2	BDL (DL - 0.01)
27	Barium (as Ba)	mg/l	IS 3025 (Part 2) : 2019	0.03		BDL (DL - 0.01)
28	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	No relaxation	BDL (DL - 0.01)
29	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	2.4	BDL (DL - 0.1)
30	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	1.5	BDL (DL - 0.03)
31	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	BDL (DL - 0.001)
32	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	0.16
33	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
34	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994		0.3	BDL (DL - 0.05)
35	Molybdenum (as Mo)	mg/l	IS 3025 (Part 2) : 2019	0.001	No relaxation	BDL (DL - 0.0005)
36	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.07	No relaxation	BDL (DL - 0.01)
37	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.02	No relaxation	BDL (DL - 0.01)
38	Silver (as Ag)	mg/l	IS 13428 (Annex J): 2005	0.01	No relaxation	BDL (DL- 0.001)
39	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.1	No relaxation	BDL (DL - 0.001)
40	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019 IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03) BDL (DL - 0.1)

Delease refer last Page for Note and Remarks.

Verified By

Mangesh Fande Technical Manager

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Dr. (Mrs.) S.D. Garway Quality Manager

10





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Test Report

1991	ued To:-	Sample Inward	No ALL	PI /20002022/T	NIV MOUL ONLY		Page 3 of 3
M/s	s. Hindalco Industries Ltd.,	Inward Date			ENV-219/1-GW-1	Analysis Start	21/09/2023
V	dag Willes DO D	Inwald Date	20/0	09/2023		Analysis End	25/09/2023
NUC	dag Village, P.O. Dumarkholi,	Reference	135	62310015		Report Issue	30/09/2023
Tehsil Samri (Kusmi), Disrict: Balrampur (C.G)			100	02010015		Date	00/07/2020
		Reference Dat	e 20/	05/2023		Sample Category	Cround Wat
	Sample Name		10			- mipic cutegor	y Ground Wate
	Ground Water		Sample Co		1200 DI 120	Quantity	Received
		Anacon Rep	resentative	Mr. Kailash	Chahande	5 L &	250ml
	Sampling Location	Sample So	urce	Samp	ling Date		
	Saraidih (Hindalco Campus)	Borewell W	Vater	the second se	09/2023	Samplin	a provide a second a second a second
			TEST RES	ULTS IL	07/2020	12.20) pm
	8		- DOT RES	0115	Dear	-	1
					Require	ement as per	
S.N.	Test Parameter	Measurement			(Drinking Wa	500 : 2012	Test Result
	rest i arameter	Unit	Test	Method	Including A	ter Specifications) mendment No. 4	rest result
			Cint		Acceptable	Permissible	
					Limit	Limit #	
п	Chemical Testing				1 Dinin		
41	2. Residues In Water Polychlorinated biphenyls						
	2,4,4'-trichlorobiphenyl	μg/l		ES/04: 2018	7		BDL (DL - 0.03
	2,2',5,5'-tetrachlorobiphenyl	μg/l		ES/04: 2018	0.5		BDL (DL - 0.03
	2,2',4,5,5'-pentachlorobiphenyl	μg/l		ES/04: 2018			BDL (DL - 0.03
	2,2',3,4,4',5'-hexachlorobiphenyl	μg/l		ES/04: 2018		No relaxation	DDD (DD 0.0.
	2,2,3,4,4,3 -nexachiorobiphenyl	μg/l			0.0	I NO relaxation	BDI (DI = 0.03
	2 21 A A' 5 5' howerhland internet			ES/04: 2018]	No relaxation	
	2,2',4,4',5,5'-hexachlorobiphenyl	μg/1	ANtr/7.2/R	ES/04: 2018		No relaxation	BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl		ANtr/7.2/R			No relaxation	BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons	μg/l μg/l	ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018		No relaxation	BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene	μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018		No relaxation	BDL (DL - 0.03 BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene	μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018		INO relaxation	BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene	μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018		INO relaxation	BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene	μg/1 μg/1 μg/1 μg/1 μg/1 μg/1 μg/1	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene	μg/1 μg/1 μg/1 μg/1 μg/1 μg/1 μg/1 μg/1	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018	0.1	No relaxation	BDL (DL - 0.03 BDL (DL - 0.03
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03)
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Benzo(a)pyrene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03)
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Benzo(b)fluoranthene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03)
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03)
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Indeno(123,cd)pyrene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03) BDL (DL - 0.03 BDL (DL - 0.03)
42	2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/03: 2018			BDL (DL - 0.03 BDL (DL - 0.03 BDL (DL - 0.03

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Verified By

Radha Pawar Chemist

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Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

T	AL DI /DOGGOGGG TO US		Page 4 of 5	
The second		1 Analysis Start	21/09/2023	
Hindalco Industries Ltd., Inward Date 20/09/2023 ag Village, P.O. Dumarkholi, Reference 12562210015		Analysis End	25/09/2023	
Reference	e 13562310015		30/09/2023	
Reference Date 20/05/2023			Ground Wate	
		Quantity	Received	
Sample Source Borewell Water	Sampling Date	Samplin	ling Time	
	Reference Date Samp Anacon Represent Sample Source	Sample Inward No.ALPL/20092023/ENV-219/1-GW- 20/09/2023Inward Date20/09/2023Reference13562310015Reference Date20/05/2023Sample Collected By Anacon Representative Mr. Kailash ChahandeSample SourceSampling Date	Sample Inward No. ALPL/20092023/ENV-219/1-GW-1 Analysis Start Inward Date 20/09/2023 Analysis End Reference 13562310015 Report Issue Reference Date 20/05/2023 Date Sample Collected By Quantity I Anacon Representative Mr. Kailash Chahande 5 L & 2 Sample Source Sampling Date Sampling Date	

S.N.	Test Parameter Measurem Unit		Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
43	Trihalomethanes			Acceptable Limit	Permissible Limit #	
i	Bromoform	mg/l	1			
ii	Dibromochloromethane	mg/l	-	0.1	No relaxation	BDL (DL -0.05)
iii	Bromodichloromethane	and the second se	ANtr/7.2/RES/05: 2018	0.1	No relaxation	BDL (DL -0.05)
iv	Chloroform	mg/l	4	0.06	No relaxation	BDL (DL -0.05)
44	Pesticide Residues Organochlo	mg/l		0.2	No relaxation	BDL (DL -0.05)
i	Alpha-HCH	1				
ii	Beta HCH	μg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BDL (DL - 0.01
iii		μg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
iv	Gamma - HCH (Lindane)	μg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03
1000	Delta- HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
v	Alachlor	μg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BDL (DL - 0.03)
vi	Aldrin	μg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
vii	Dieldrin	μg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
viii	Butachlor	μg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	
ix	p,p'-DDE	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
х	o,p'-DDE	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xi	p,p'-DDD	μg/1	ANtr/7.2/RES/01: 2018	1		BDL (DL - 0.03)
xii	o,p'-DDD	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiii	o,p'- DDT	μg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xv	Endosulphan	1.0.		1	No relaxation	BDL (DL - 0.03)
	Alpha-Endosulphan					
1	Beta-Endosulphan	μg/l	ANtr/7.2/RES/01: 2018	0.4		
	Endosulphan sulphate	μg/1	AUNU/7.2/KES/01: 2018	0.4	No relaxation	BDL (DL - 0.03)

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Radha Pawar Chemist

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Dr. (Mrs.) S.D. Garway Quality Manager



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work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavor towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in



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Test Report

Issued To:-	Sample Inward No.	AL BL (20002022 (5) 11 244 (1)		Page 5 of 5
M/s. Hindalco Industries Ltd.,	Inward Date	ALPL/20092023/ENV-219/1-GW-	Jois Start	21/09/2023
			Analysis End	25/09/2023
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference	10002010010		30/09/2023
Disrict: Balrampur (C.G)	Reference Date	20/05/2023	Date Sample Category	Ground Water
Sample Name Ground Water		le Collected By ative Mr. Kailash Chahande	Quantity	Received
Sampling Location Saraidih (Hindalco Campus)	Sample Source Borewell Water	Sampling Date 12/09/2023	5 L & 250ml Sampling Time 12.20 pm	

S.N.	Test Parameter	Measurement Unit	Test Method	IS 105 (Drinking Wat Including An	ment as per 00 : 2012 er Specifications) nendment No. 4	Test Result
44	Pesticide Residues Organopho	on harris		Acceptable Limit	Permissible Limit #	1
xvi	2 4 Dichlemach					
xvii	2,4-Dichlorophenoxyacetic acid	μg/l	ANtr/7.2/RES/02:2018	30	No relaxation	BDL (DL - 0.03
	Monocrotophos	μg/l	ANtr/7.2/RES/02 : 2018	1	No relaxation	BDL (DL - 0.03
xviii	Atrazine	μg/l	ANtr/7.2/RES/02:2018	2	No relaxation	
xix	Parathion methyl	μg/l	ANtr/7.2/RES/02 : 2018	0.3		BDL (DL - 0.03
XX	Paraoxon methyl	μg/l	ANtr/7.2/RES/02 : 2018	0.5	No relaxation	BDL (DL - 0.03)
xxi	Isoproturon	μg/l	ANtr/7.2/RES/02 : 2018	-	-	BDL (DL - 0.03)
xxii	Malathion	μg/l	ANtr/7.2/RES/02 : 2018	9	No relaxation	BDL (DL - 0.03)
xxiii	Malaoxon			190	No relaxation	BDL (DL - 0.03)
xxiv	Ethion	μg/l	ANtr/7.2/RES/02 : 2018			BDL (DL - 0.03)
XXV		μg/l	ANtr/7.2/RES/02:2018	3	No relaxation	BDL (DL - 0.03)
	Chlorpyrifos	μg/l	ANtr/7.2/RES/02 : 2018	30	No relaxation	BDL (DL - 0.03)
xxvi	Phorate					DDD (DL - 0.03)
	Phorate-sulfone	μg/1	ANtr/7.2/RES/02 : 2018	2	No relevation	DDI (DI A AA
	Phorate-sulfoxide			4	No relaxation	BDL (DL - 0.03)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and alternate source for drinking water. • 'mg/l' is equivalent to 'ppm'. • 'µg/l' is equivalent to 'ppb'. • BDL- Below detection limit. • DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. • Result for test no. 11 is not relevant. • ANqr RES-: Inhouse validated method.

REMARKS: As requested by the client, sample was tested for above parameters only. Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

Radha Pawar Chemist

-----END OF REPORT------

Authorized Signatory

Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

Ise	st Report No. : ALPL/30092023/ ued To:-						Page 1 of 5
		Sample Inward	No. AL	.PL/20092023/EI	NV-219/1-GW-2	Analysis Start	21/09/2023
M/	s. Hindalco Industries Ltd.,	Inward Date	20	/09/2023		Analysis End	
Ku	dag Village, P.O. Dumarkholi,	Reference 13562310015				1 (ST)	25/09/2023
Teh	isil Samri (Kusmi),				Report Issue Date	30/09/2023	
Dis	rict: Balrampur (C.G)	Reference Date	e 20,		Sample Categor	y Ground Wate	
	Sample Name		Sample Co	ollected By			Received
	Ground Water			Mr. Kailash (Chahande		
	Sampling Location	Sample So			ing Date		250ml
	Kudag Village	Borewell W		10000	9/2023		ng Time
			TEST RES		5/2025	12.5	0 pm
			. JOI KE	50115	Paquin	ement as per	1
S.N.	Test Parameter	Measurement Unit	Tes	Method	IS 10 (Drinking Wa	500 : 2012 ter Specifications) mendment No. 4	Test Result
I	Piological Testing 1 W				Acceptable Lin	Dennis (b)	1
1	Biological Testing 1. Water Coliform	D 100 1			V		
2	Escherichia coli	Per 100 ml		185 : 2016	Absent	Absent	Absent
II	Chemical Testing 1. Water	Per 100 ml	IS 15	185:2016	Absent	Absent	Absent
3	Alkalinity (as CaCO ₃)		10.0000				
4	Ammonia (as N)	mg/l	15 3025 (1	Part 23): 1986	200	600	182.57
5	Anionic surface active agents (as MBAS)	mg/l	IS 3025 (Part 34) : 1988 IS 13428 : 2005 Annex K		0.5	No relaxation	BDL (DL - 0.1)
6	Colour	mg/l Hazen units	15 13428 :	2005 Annex K	0.2	1.0	BDL (DL - 0.01
7	Cyanide (as CN)	mg/l	15 3025 (Part 4) : 2021	5	15	1
8	Chloride (as Cl)	mg/l	15 3025 (1	Part 27) : 1986 Part 32) :1988	0.05	No relaxation	BDL (DL - 0.005
9	Calcium (as Ca)	mg/l	IS 3025 (I	Part 32):1988 Part 40): 1991	250	1000	32.64
10	Chloramines (as Cl ₂)	mg/l		Part 26) : 2021	75	200	57.13
1	Free residual chlorine	mg/l	IS 3025 (F	Part 26) : 2021	4.0 Min. 0.2	No relaxation	BDL (DL - 0.1)
12	Fluoride (as F)	mg/l	IS 3025 (F	Part 60) : 2008	1.0	1	BDL (DL - 0.1)
3	Magnesium (as Mg)	mg/l	IS 3025 (I	Part 46) : 1994	30	1.5	0.21
4	Nitrate (as NO ₃)	mg/l	APHA 2	23rd Edition	45	No relaxation	12.68
5	Odour	~ /		Part 5): 2018	Agreeable	Agreeable	BDL (DL - 2)
6	pH	-		art 11) : 2022	6.5 to 8.5	No relaxation	Agreeable 8.16 at 25°C
7 8	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	IS 3025 (F	art 43): 1992	0.001	0.002	BDL (DL - 0.001
8 9	Sulphate (as SO ₄)	mg/l	IS 3025 (P	art 24) : 2022	200	400	21.37
9	Sulphide (as H ₂ S) Taste	mg/l	IS 3025 (P	art 29) : 1986	0.05	No relaxation	BDL (DL - 0.03)
1		-	IS 3025 (I	Part 8) : 1984	Agreeable	Agreeable	Agreeable
2	Total dissolved solids	mg/l		art 16) : 2023	500	2000	462
3	Turbidity Total hardness (as CaCO ₃)	NTU		art 10) : 1984	1	5	0.3
4	Mineral Oil	mg/l		art 21) : 2009	200	600	194.90
		mg/l	A N 4-17	2/RES/06	1	No relaxation	BDL (DL - 0.1)

Please refer last Page for Note and Remarks.

Snehal Raut

Deputy Technical Manager

Verified By

Radha Pawar Chemist

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Pooja Kathane

Technical Manager

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Dr. (Mrs.) S.D. Garway Quality Manager



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work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavor towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in



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Test Report

Issued To:- M/s. Hindalco Industries Ltd.,	Sample Inward No. Inward Date	ALPL/20092023 20/09/2023	/ENV-219/1-GW-2	Analysis Start Analysis End	Page 2 of 5 21/09/2023 25/09/2023	
Kudag Village, P.O. Dumarkholi, Tehsil Samri (Kusmi),	Reference	13562310015		Report Issue Date	30/09/2023	
Disrict: Balrampur (C.G)	Reference Date	20/05/2023		Sample Category	Ground Wate	
Sample Name Ground Water	Sample Collected By Anacon Representative Mr. Kailash Chahande			Quantity Received 5 L & 250ml		
Sampling Location Kudag Village	Sample Source Borewell Water		2/09/2023	Samplin 12.50	g Time	
	TEST	FRESULTS			pin	
			Requirem			

S.N.	Test Parameter	Measurement Unit	Test Method	IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result	
				Acceptable Limit	Permissible Limit #	1	
п	Chemical Testing 2. Residues In Water						
25	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01			
26	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.01)	
27	Barium (as Ba)	mg/l		0.03	0.2	BDL (DL - 0.01)	
28	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.7	No relaxation	BDL (DL - 0.01)	
29	Copper (as Cu)		IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)	
30	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)	
31	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)	
32	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.17	
33		mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)	
34	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)	
	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.0005)	
35	Molybdenum (as Mo)	mg/l	IS 3025 (Part 2) : 2019	0.07	No relaxation	BDL (DL - 0.00)	
36	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation		
37	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.01)	
38	Silver (as Ag)	mg/l	IS 13428 (Annex J): 2005	0.01		BDL (DL- 0.001)	
39	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.001)	
40	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	No relaxation	BDL (DL - 0.03)	
(12925)			(5	15	BDL (DL - 0.1)	

Please refer last Page for Note and Remarks.

Verified By

Mangesh Fande Technical Manager

Authorized Signatory

D

Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

1551	ued To:-	Sample Inward	No. AL	PL /20092022/F	ENV-219/1-GW-2		Page 3 of			
M/s	s. Hindalco Industries Ltd.,	Inward Date			SINV-219/1-GW-2	Analysis Start	21/09/2023			
Kur	dag Villago BO D		20/	09/2023		Analysis End	25/09/2023			
T	dag Village, P.O. Dumarkholi,	Reference 13562310015			Report Issue	30/09/2023				
	sil Samri (Kusmi),				Date	50/09/2025				
Disi	rict: Balrampur (C.G)	Reference Dat	e 20/	Sample Categor	Ground Wat					
	Sample Name		Sample Co							
	Ground Water					Quantity	Received			
	Sampling Location	Anacon Rep		Mr. Kailash	Chahande	5 L &	250ml			
		Sample So		Samp	ling Date	Samplin	ag Time			
	Kudag Village	Borewell V	Vater		09/2023		States in the second states in			
_	1		TEST RES		07/2020	12.50) pm			
				0.010	Paguin	and and an	1			
					IS 10	ement as per 500 : 2012				
S.N.	Test Parameter	Measurement			(Drinking Wo	ter Specifications)	Test Result			
		Unit	Test	Method	Including A	mendment No. 4				
					Acceptable	Permissible				
п	Chemical Testing				Limit	Limit #				
	2. Residues In Water			. 2		Addit IT				
41	Polychlorinated biphenyls									
	2,2',5-trichlorobiphenyl	μg/l	ANtr/7 2/P	ES/04: 2018	E.					
	2,4,4'-trichlorobiphenyl	μ <u>g</u> /l		ES/04: 2018	-		BDL (DL - 0.0			
	2,2',5,5'-tetrachlorobiphenyl	μg/l		ES/04: 2018	-		BDL (DL - 0.0.			
	2,2',4,5,5'-pentachlorobiphenyl		I LI VLI/ / . Kal EX	L3/04. 2018						
		ug/1	ANtr/7 2/P	ES/04: 2019	1 0.5	1.1	BDL (DL - 0.03			
	2,2',3,4,4',5'-hexachlorobiphenvl	μg/l μg/l	ANtr/7.2/R	ES/04: 2018	0.5	No relaxation	BDL (DL - 0.03			
	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl	µg/l	ANtr/7.2/R ANtr/7.2/R	ES/04: 2018	0.5	No relaxation	BDL (DL - 0.03			
	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl	μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons	µg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene	μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0) BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene	μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0) BDL (DL - 0.0) BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene	μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene	μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018	0.5	No relaxation	BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018	0.5		BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene	µg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018 ES/03: 2018		No relaxation	BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthylene Acenaphthylene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018			BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Benzo(b)fluoranthene	μg/l μg/l μg/l μg/l μg/l μg/l μg/l μg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018			BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene	µg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018			BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Indeno(123,cd)pyrene	µg/l µg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018			BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chryšene Benzo(a)pyrene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Indeno(123,cd)pyrene Dibenzo(a,h)anthracene	µg/l µg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018			BDL (DL - 0.0) BDL (DL - 0.0)			
42	2,2',3,4,4',5'-hexachlorobiphenyl 2,2',4,4',5,5'-hexachlorobiphenyl 2,2',3,4,4',5,5'-heptachlorobiphenyl Polynuclear aromatic hydrocarbons Naphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Indeno(123,cd)pyrene	µg/l µg/l	ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R ANtr/7.2/R	ES/04: 2018 ES/04: 2018 ES/04: 2018 ES/03: 2018			BDL (DL - BDL (DL -			

Please refer last Page for Note and Remarks.

Verified By

Radha Pawar Chemist

Authorized Signatory

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Dr. (Mrs.) S.D. Garway Quality Manager



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Test Report

Issu	t Report No. : ALPL/3009 red To:-		Inward No.	AL DI /20	000000 / 01 01 01 01 01	see 1 as	Page 4 of 5
M/s	. Hindalco Industries L	Ld Inward	and the second sec		092023/ENV-219/1-GW		21/09/2023
Kud	lag Villege D.O. D.	ta., mwalu	Date	20/09/20	23	Analysis End	25/09/2023
Tab	lag Village, P.O. Dumarki	noli, Referen	nce	1356231	0015	Report Issue	30/09/2023
	sil Samri (Kusmi),	The second second				Date	
Disr	ict: Balrampur (C.G)	Referer	nce Date	20/05/20	023	Sample Catego	ry Ground Water
	Sample Name		Sample Collected By				
	Ground Water	Ana	con Represent	ativo Mr. I	Cailach Chul	12 C C C C C C C C C C C C C C C C C C C	y Received
	Sampling Location		Anacon Representative Mr. Kailash Chahande Sample Source Sampling Date			5 L &	: 250ml
						Sampl	ing Time
Kudag Village		Во	rewell Water		12/09/2023	2/09/2023 12.5	
		1	TEST	RESULT			- pm
S.N.	. Test Parameter Measuremen Unit		Test M	ethod	IS 105 (Drinking Wat Including An	nent as per 00 : 2012 er Specifications) nendment No. 4	Test Result
43	Trihalomethanes				Acceptable Limit	Permissible Limit #	
i	Bromoform	mg/l	1			/	
ii	Dibromochloromethane	mg/l	1		0.1	No relaxation	BDL (DL -0.05
iii	Bromodichloromethane	mg/l	ANtr/7.2/RE	S/05: 2018	0.1	No relaxation	BDL (DL -0.05
iv	Chloroform	mg/l	1		0.06	No relaxation	BDL (DL -0.05
44	Pesticide Residues Organochlor	rine			0.2	No relaxation	BDL (DL -0.05)
i	Alpha-HCH	μg/l	ANtr/7.2/RES/	01-2018	0.01		
ii	Beta HCH	μg/1	ANtr/7.2/RES/		0.01	No relaxation	BDL (DL - 0.01
iii	Gamma - HCH (Lindane)	μg/l	ANtr/7.2/RES/	01:2018	0.04	No relaxation	BDL (DL - 0.03
iv	Delta- HCH	μg/1	ANtr/7.2/RES/(2	No relaxation	BDL (DL - 0.03
v	Alachlor	μg/l	ANtr/7.2/RES/0		0.04	No relaxation	BDL (DL - 0.03
vi	Aldrin	μg/l	ANtr/7.2/RES/0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20	No relaxation	BDL (DL - 0.03
vii	Dieldrin	μ <u>g</u> /l	ANtr/7.2/RES/0		0.03	No relaxation	BDL (DL - 0.03
viii	Butachlor	μg/l	ANtr/7.2/RES/0		0.03	No relaxation	BDL (DL - 0.03
ix	p,p'-DDE	μg/1	ANtr/7.2/RES/0			No relaxation	BDL (DL - 0.03)
X	o,p'-DDE	μg/l	ANtr/7.2/RES/0		1	No relaxation	BDL (DL - 0.03)
xi	p,p'-DDD	μg/1	ANtr/7.2/RES/0		1	No relaxation	BDL (DL - 0.03)
xii	o,p'-DDD	μg/l	ANtr/7.2/RES/0		1	No relaxation	BDL (DL - 0.03)
iii	o,p'- DDT	μg/l	ANtr/7.2/RES/0		1	No relaxation	BDL (DL - 0.03)
iv	p,p'- DDT	μg/l	ANtr/7.2/RES/0		1	No relaxation	BDL (DL - 0.03)
«v	Endosulphan					No relaxation	BDL (DL - 0.03)
	Alpha-Endosulphan						
	Beta-Endosulphan	μg/1	ANtr/7.2/RES	/01.2018	0.4	N7 1	
ſ	Endosulphan sulphate		A THE TREAMED	2010	0.4	No relaxation	BDL (DL - 0.03)

Delease refer last Page for Note and Remarks.

Verified By

Radha Pawar Chemist

Authorized Signatory

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Dr. (Mrs.) S.D. Garway Quality Manager





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Test Report

Test Report	No.	:AI	PL/3009	2023/2-8	
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Complete 137			Page 5 of 5	
		Joid Otart	21/09/2023	
and the second sec	20/09/2023		25/09/2023	
Reference	13562310015	Date	30/09/2023	
Reference Date	20/05/2023	Sample Category	Ground Wate	
		Quantity Received		
Sample Source Borewell Water	Sampling Date 12/09/2023	Sampling Time 12.50 pm		
	Samp Anacon Represent Sample Source	Inward Date 20/09/2023 Reference 13562310015 Reference Date 20/05/2023 Sample Collected By Anacon Representative Mr. Kailash Chahande Sample Source Sampling Date	Inward Date 20/09/2023 Analysis Start Reference 13562310015 Report Issue Date Reference Date 20/05/2023 Sample Category Sample Collected By Anacon Representative Mr. Kailash Chahande 5 L & 2 Sample Source Sampling Date Sampling	

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	IS 105 (Drinking Wat Including An	ment as per 00 : 2012 er Specifications) nendment No. 4	Test Result			
44	Postigida Desidues Orean I			Acceptable Limit	Permissible Limit #	BDL (DL - 0.03) BDL (DL - 0.03)			
	Pesticide Residues Organopho	sphorus							
xvi	2,4-Dichlorophenoxyacetic acid	μg/l	ANtr/7.2/RES/02:2018	30	No relaxation	BDI (DI _ 0.02)			
xvii	Monocrotophos	μg/l	ANtr/7.2/RES/02 : 2018		No relaxation				
xviii	Atrazine	μg/l	ANtr/7.2/RES/02:2018	2	No relaxation	the second se			
xix	Parathion methyl	μg/l	ANtr/7.2/RES/02 : 2018	0.3	and the second se				
XX	Paraoxon methyl	μg/l	ANtr/7.2/RES/02 : 2018	0.5	No relaxation				
xxi	Isoproturon	μg/l	ANtr/7.2/RES/02 : 2018	-	-				
xxii	Malathion		ANtr/7.2/RES/02:2018	9	No relaxation	BDL (DL - 0.03)			
xxiii	Malaoxon	μg/l		190	No relaxation	BDL (DL - 0.03)			
	Ethion	μg/1	ANtr/7.2/RES/02:2018	-	-	BDL (DL - 0.03)			
xxiv		μg/l	ANtr/7.2/RES/02 : 2018	3	No relaxation	BDL (DL - 0.03)			
XXV	Chlorpyrifos	μg/l	ANtr/7.2/RES/02:2018	30	No relaxation	BDL (DL - 0.03)			
xxvi	Phorate				1.0 returner off	DDL (DL = 0.03)			
	Phorate-sulfone	μg/l	ANtr/7.2/RES/02 : 2018	2	No relevation	DDL (DL 0.02)			
	Phorate-sulfoxide			É	No relaxation	BDL (DL - 0.03)			

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • #Permissible limit in absence of an alternate source for drinking water. • mg/l' is equivalent to 'ppm'. • 'µg/l' is equivalent to 'ppb'. • BDL- Below detection limit. • DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. • Result for test no. 11 is not relevant. • ANqr RES-: Inhouse validated method.

REMARKS: As requested by the client, sample was tested for above parameters only. Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

-END OF REPORT-

Verified By

Radha Pawar Chemist

Authorized Signatory

Dr. (Mrs.) S.D. Garway Quality Manager





भारत सरकार जल शक्ति मंत्रालय जल संसाधन, नदी विकास और गंगा संरक्षण विभाग केन्द्रीय भूमि जल प्राधिकरण Government of India Ministry of Jal Shakti Department of Water Resources, River Development & Ganga Rejuvenation Central Ground Water Authority

Annexure-E

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)

NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Kudag Bauxite Mines Of M/s Hindalco Industries Limited						
Project Address:	Village Kudag Block Kusmi	Village Kudag Block Kusmi					
Village:	Kudag	Block:	Kusmi				
District:	Balrampur	Chhattisgarh					
Pin Code:							
Communication Address:	Hindalco Industries Limited, Sar Kusmi, , Balrampur, Chhattisgar		livision, Baba Chowk, At And Po-				
Address of CGWB Regional Office :	Central Ground Water Board North Central Chhattisgarh, 2nd Floor, Lk Corpora And Logistic Park, Dhamtari Road, Nh-30, Dumartarai, Raipur, Chhattisgarh - 492015						
		1.7.7					

1.	NOC No.:		CGWA/	NOC.	/MIN/R	FN/2/2	023/75	570	2.	Date o	of Issuen	ce 01	3/04/202	23	
3.	Application I	No.:		-4/1433/CT/MIN/2018			4.	Category: (GWRE 2020)			Safe				
5.	Project State	us:	Existing	g Grou	und Wa	ter		~	6.	NOC Type: Renewal					
7.	Valid from:		29/04/2	4/2023 8			8.	Valid	/alid up to: 28/04/2025						
9.	Ground Wat	er Abstr	action P	Permit	ted:		. 1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~							
Fresh Water Saline Water			Dev	waterin	atering Total										
	m³/day	m³/yea	ar	m³/o	day	m³	/year	m	³/day	m³/year		m	m³/day m³.		/year
	2.00	620.0	0		~	X									
10.	Details of gr	ound wa	ater abst	ractio	n /Dew	atering	g struct	ures							
			Total	Exist	ing No	.:3					То	tal Pro	posed N	lo.:0	
			C	W	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu
	Abstraction S	Structure	* .0	0	0	1	2	0	0	0	0	0	0	0	0
*DW	/- Dug Well; DCE	3-Dug-cum	n-Bore We	ell; BW-	Bore We	ll; TW-T	ube Wel	l; MP-Mine	Pit;MPu	-Mine Pu	umps				
11.	Ground Wat	er Abstr	action/R	Restor	ation C	harges	s paid ((Rs.):				62	0.00		
	P														

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011 Phone: (011) 23383561 Fax: 23382051, 23386743 Website: cgwa-noc.gov.in

> पानी बचाये – जीवन बचाये SAVE WATER - SAVE LIFE

Validity of this NOC shall be subject to compliance of the following conditions:

Mandatory conditions:

1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.

2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.

3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.

4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.

5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.

6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.

7) The firm shall report compliance of the NOC conditions online in the website (www.cqwa-noc.gov.in) within one year from the date of issue of this NOC.

8) Industries abstracting ground water in excess of 100 m 3 /d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.

9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.

10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

General conditions:

11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).

12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).

13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.

14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.

15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.

16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water

17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.

18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.

19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.

20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.

21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.

22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.

23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.

24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.

25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCE list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.

26) In case of new infrastructure projects having ground water abstraction of more than 20 m3/day, the firm/entity shall ensure implementation of dual water supply system in the projects.

27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.

28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.

29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 failing which penalty/EC/cancellation of NOC shall be imposed as the case may be.
 30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).

(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011 Phone: (011) 23383561 Fax: 23382051, 23386743 Website: cgwa-noc.gov.in

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CENTRAL GROUND WATER AUTHORITY

Department of Water Resources, River Development and Ganga Rejuvenation Ministry of Jal Shakti, Govt. of India

Receipt

(As per the guideline Gazette Notification S.O. 3281(E) regarding the New Guidelines dated 24.09.2020 of CGWA, MoJS, Govt. of India) https://cgwa-noc.gov.in

Application No,:	21-4/1433/CT/MIN/2018	1-4/1433/CT/MIN/2018						
Name of Firm:	KUDAG BAUXITE MINES OF	M/S HINDALCO INDUSTR	IES LIMITED					
AppType Category:	Base Metal Ores							
Application Type:	Mining		~					
PAN/GSTIN No. of Firm	/Individual:	/	\sim					

S N	Description	Amount (Rs.)
•	Application Processing Fee	1000.00
	Ground Water Abstraction /Restoration charges	620.00
•	Environmental Compensation Charges (ECRGW) (Date From to) Days-	
-	Penalty for non-Compliance of NOC conditions Condition to be mentioned	
	Rs. Rupees One Thousand Six Hundred Twenty Only	1620.00
	CEMPAN GROUND W	

Annexure-F

HINDALCO INDUSTRIES LIMITED Kudag Bauxite Mines

Self Help Grou	p (SHGs), Kudag
No. of SHGs:	12
No of Beneficiaries:	120
No of group linked with bank:	12
Average Saving / Group – Rs. 10,000/-	Rs. 10,000/-
Facility provided to groups:	Register, Passbook, Dari, Sewing Machine, Income Generation training and other exposure programme like linkages with bank and training with NRLM.
Groups engaged in income generation activities:	12

			SHGs Detai	ils: Kudag			
					A/C Details		E
SI. No	SHG Name	Village Name	District Name	No. of Members	Members Savings in Bank A/C	Bank Loan Received	Economic Activity Name
1	Nuri Self Help Group	Saraidih	Balrampur	10	7041.00	-	Agriculture
2	Shabnam Self Help Group	Saraidih	Balrampur	10	7984.00	-	Agriculture
3	Suhana Self Help Group	Saraidih	Balrampur	10	5755.00	-	
4	Rupa Self Self- Help Group	Saraidih	Balrampur	10	4755.00	-	Agriculture
5	Sushila Self Help Group	Banjutoli	Balrampur	10	6500.00	_	Agriculture
6	Chameli Self Help Group	Bata	Balrampur	10	2625.00		Agriculture
7	Chameli Self Help Group	Bata (Banjutoli)	Balrampur	10	7000.00	-	Agriculture
8	Punam Self Help Group	Balapani	Balrampur	10	19500.00	-	Agriculture
9	Gulab Self Help Group	Kudag	Balrampur	10	13134.00	-	Agriculture
10	Shubham Self Help Group	Balapani	Balrampur	10	6500.00	-	Agriculture
11	Chameli Self Help Group	Kudag	Balrampur	10	12000.00	-	Agriculture
12	Resham Self Help Group	Kudag	Balrampur	10	8000.00	-	Agriculture

Posedly

For Hindalco Industries Limited Samn Mines Division Hindalco Industries Ltd

Kudag Bauxite Mines

Six monthly Average Ambient Air Quality Data

	Period:	October	<u>2023 t</u>	o March	<u>2024</u>
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Month Monitoring Monitoring Parameters			Parameters		
Month	Location	PM ₁₀ (μg/m ³)	$PM_{2.5}(\mu g/m^3)$	$SO_2 (\mu g/m^3)$	NOx ($\mu g/m^3$)
Oct-23	-	57.0	20.9	11.0	20.6
Nov-23		70.8	27.6	14.2	26.4
Dec-23		74.0	29.3	13.4	24.9
Jan-24	Sairaidh	64.8	25.3	10.6	19.9
Feb-24	Campus	60.9	20.1	11.4	21.1
Mar-24		67.7	24.7	11.8	19.7
Six Monthly Average	-	65.9	24.7	12.1	22.1
Oct-23		62.2	23.3	11.8	22.3
Nov-23		61.6	22.3	11.9	20.5
Dec-23		70.6	28.0	14.1	25.3
Jan-24	New Kudag/Nr.	62.8	22.9	12.2	21.0
Feb-24	Weigh Bridge	61.6	22.7	11.7	22.9
Mar-24		70.1	23.2	13.7	23.4
Six Monthly Average		64.8	23.7	12.6	22.6
Oct-23		56.4	21.9	11.8	22.7
Nov-23		66.1	26.5	14.3	25.5
Dec-23		69.3	26.6	14.6	24.9
Jan-24	Old Kudag/Mining	59.2	20.1	10.0	18.6
Feb-24	Area	61.6	20.7	11.3	19.6
Mar-24		69.2	25.6	13.1	22.2
Six Monthly Average		63.6	23.6	12.5	22.3
Oct-23	Samri Gopatu/ Nr. Weigh Bridge	61.8	23.7	12.6	24.5
Nov-23		71.5	29.5	14.4	26.7
Dec-23		70.2	28.5	15.5	27.7
Jan-24		71.0	29.0	12.5	28.1
Feb-24		71.7	32.7	13.8	19.0
Mar-24		71.3	26.3	15.4	28.4
Six Monthly Average		69.6	28.3	14.0	25.7
NAAQ Standard		100	60	80	80

For Hindalco Industries Limited



Hindalco Industries Limited

Mines Division, Samri

Date: 22-01-2024

Environment Management Cell

An Environment Management Cell is reconstituted by the following members which is compliance of the EC Conditions for the Samri, Tatijharia and Kudag Bauxite Mines.

Sl. No.	Name	Designation	Position
01	Mr. Sanjay Pardhi	Head & Agent of Mines	Chairman
02	Mr. Amit Tiwari	Manager-Mines	Secretary
03	Mr. Praween Pradhan	Manager-Geology	Member
04	Mrs. Madhusmita Parida	Asst. Manager-Env	Member
05	Mr. Ashutosh Saha	Asst. Manager-Sustainability	Member
06	Dr. Ajay Kumar	Medical Officer	Member
07	Mr. K K Singh	Dy. Manager	Member

Bedly

Agent of Mines

HINDALCO INDUSTRIES LIMITED Samri Mines, Division, Baba Chowk At & Post - Kusmi, PIN : 497 224, Distt - Balrampur-Ramanujganj (C.G.), INDIA Telephone + 91 7778 274326-27 FAX + 91 7778 274325

REGISTERED OFFICE

Ahura Centre, 1 st Floor, B-Wing Mahakali Caves Road, Andheri (East) Mumbai 400 093, INDIA Telephone +91 22 6662 6666 Tel : +91 226691 7000 / Fax : +91 226691 7001

Webste : www.hindalco.com E-mail : hindalco@adityabirla.com Corporate Identity No. - L27020MH1958PLC011238

Annexure - I



वया। शावन येवे रिगझिम फुहारा पुत्री किरण का वेवाह २० मई क्शालकोम पूछा छतीसगढ प्रदेश के प्रतमान सांसय हे मध्य चले इस आदोलन में भाग एवं पूर्व मुख्यमंत्री झजीत प्रमोद अभीत प्राहेशी के १९९७ को तरहतपुर खाना अंतर्गत. लेने कुसमुख्स, नेवरा, एनटीपीसी, एचटीपीपी, डाल्को, निष्ठारिका जन्मवियस के अवसर पर ग्राम आमोदा निवानी शामनाथ के पुत्र जोगी के सुभुत्र अभित जोगी का अस्पताल परितर में कात एव रथानीय युवा कार्यकलाओं ने जन्म राजेंद्रप्रसाद पाठन के पुत्र के साथ सहित समें क्षेत्रों के लोगों ने cibri हुआ था। विवाह के एक साल बाद ही किरण को दहेन के लिए प्रतादित विरिकट वितरण के चक्स इस्मोविन्द विवस मनाया। परवालगांव के भाग लिया दो मंदे तक चले इस अग्रवाल मनोज अम्पस्ट, रपि त्तागुवाधिक 'स्वारच्य केन्द्र के वार्ड आंदोलन में अन्य सभी लोग यादव, निशागुष्टीन, सुरेन्द किए जाने लगा। में पहुचकर सुवा कांग्रेसी उपस्थित थे। र से चेखवानी, शिव असंचाल; वेदचान कार्यकर्ताओं ने प्रीतभास भाटिया के सिदार, अशोक रोडिला एवं अन्य सीजन्य से फल, पिस्कुर, बेड को ंगीता को कटघोरा का प्रभार 'तानीण कार्यकला खपरिश्रस थे। दितरण किया तथा कांग्रेसी खाद नहीं मिलने को लेकर अधिकारी नीसिन पश्चित्र को कलेक्टर बनाए जाने के बाद से राजनांदगांव जगर कलेक्टर का पदोन्नति मिलने वाली थी। संकिन कृषकों ने निकाली रैली पद विगत २ - ३ नाह से रिक्त था। वे अभी स्थानासरण के लिए गडरा 81 शी देशमुख नवा अंजांश परियोधना के अपर लबासक के रलाई निगम के आयुक्त लाथ ही कितानों ने खाद की पत्थलवांच/ क्षेत्र के किशानों को खाद गईं। निरु किस्तरत के लिए व्यापारियों से पद पर चामीण जनालक के पद अए लगा रहे जोर अधिकारियाँ जारा साठगांव सक पर प्रेचायत फ्रांगेण विवास विभाग रहा है, जिसको लेकर कल छन्ने जामों की बिकी पर अधिकारी में प्रतिनियुक्ति पर को। इस मीच परवलमांव के कि सान नेवा अधिः मूंचे लमाजा देख पहे हे पू लरी २००५ बाध के छन् प्रतिष्ठ आईएम वेदप्रकाश मिन्ना ने प्रामीण किसानों यवाय नहीं काल १हे हैं। -24 अफसर्रों को सामयक बालोबटर के 317 7 प्रदेश शासन दारा 40 7000 भा तेलर १४ रेनी आश्वासन मिला एक-वो किसान crù जारी आदेश के अनुसार राघरों मद घर पदरथ किया गया है। आई एएस अर संगीता को दिन में होगा उपलब्ध रिाथ पर रहे १४ वेथ के अधिकारी आईचे Prop In the कटचोरा एवं प्रजल कुमार को हाश भारे देशमुख को पाजनाइंगांव का 600 t dt सारांगढ अन्विभागीय अधिकारी फंचे दामों में खरीदने को मजबूर विस्तार अधिवारी झी पन्ना से खाद रहरो अपर कलेक्टर पदस्य किया गया हैं। रेली में भवन राम कुजूर, सनाया पया है किल्ला के राका में जानकारी मांगी के है। डीडी सिंह को जरापुर धरगसाय कुजूर, मसरगय पन्ना, व अमंकर नारेबाजी की गई। घन्ना बुवाहोड सन्पंच, हेमराम पटेल, त जिला अध्यक्ष ने दौरा ने आज्यासन दिवा कि वे एक-यो जोत्तेक बज्ज, सीर्था पावव, टिकेश्वर दिन में खाद पत्थलगांव में खपलवा पादव व अन्य किसान मौजूद थे। कराई जायेगी। इस आश्यासन के रयाओं की जानकारी ली रेली की अनुवाई किसान नेता हारा पश्चात ही रही में उपस्थित रोक दी की गई। विस्तान वापस जाने को तैयार हुए। दुवे, भोरेलाल टाकुल, शिवगंगल सिंह, मुलेश्वय से अपनी भावनाओं से अवगत आविकावाला HINDALCO सिंह, हरिनारायण साहू, प्रभूटयाल साहू, प्रेमनगर जो ने घट मी मांग रखी कि स्ताक रागलल्कू साहू, कृष्णा साहू, रागपाठ साहू, राजेन्द्र जानवाचे, पितू, राम सिह, 5. उन्च कोणी शिलक एवं 33775 A 200 केन्द्रीय चेतनमान दिया जाना राजाकुमार पेकरा, महात्र सिंह, पारसंघति पेवास विदानमान मिलने से प्रत्येक श्रीमती मानमति भगत जीमती प्यारी दोष्मो ०० से २००० सपए वक का गि। महेगाई भरने की घोषणा संडदेव सिंह, श्रीमती कल्फल्या जायसवाल, हिण्डालको इण्डरटीज लिमिटेड कीमती सुनिता पाण्डेम, मी. एन. यादव. मो. दिए तथा महंगाई भल्ते 199 इसलाम अंसारी, रथाम माल्यण सिंह, उवयपुर (सामरी खान प्रभाग) के जेन्सार होना चाहिए तथा लाक में चुखराम यादन हरिशंकर मुफा, ी राशि केन्द्र की घोषणा के मोहेलाल राजवाडे, कतेवलदुर सिंह, प्रमोद होना चाहिए। जिल तरह से भी. कुमार कर्रांच, अलोइस टोपो, अमरनाथ महेत, रावं साधारण को स्थित किया काता है कि प्रमा एवं चयां वरण तनियों को जिला विभाग में अग्रिय मंज्रालय, नई दिल्ली से इनके पत्र क्रमॉक जे. 11015/353/2007-जाती है उसी प्रकार इस. फील IA II(M) दिनोक 27.07.2007तचा जे.- 11015/354/2007-

IA.II(M) दिनांक 27.07.2007 के तहन विपडारको उण्डारी त

लिपिटेंड के सामरी तथा कुंदाग बाबसाइंट खदानों के समता बिलार

. ०.२० मिलियन उन तथा ०.०६ (सलियन हन यांक्साइंट उपायन

प्रतिवर्ध) हेतु पर्यावस्थीय स्वीकृति अनुमोदित होकर प्राप्त हो सुकी

हे। रमगेवल स्वी कृति पत्र की प्रतिलिभि छ रा, पर्याकरण संरक्षण संहल

का पालम में उपलब्ध है एवं जन एवं पर्यावरण मंडालम की बेबसाईद

भवतीय

हिम्बलको उपकर्ताल लिभिहेड

चामरी खान प्रमाय

http://envtor.nic.ip. परभी देखी जा सकती है।

र्वक्रम में मुख्य क्षय से विक्राममुर ाम असाचि र. भी. सुबे, एग. ो. चो. सिंह, ए. के. जेन, के वर्षां,श्वयना डीवान्सव, शंजना ए र क्या क में प्रेमचन्द्र सोनी, डी गर. दी. भगत, रत्पनारायण राम. . युलाम मोहम्मद खान, के एन. ठ हुम्स, आप, भी, सिंह, भीरतोड् लाक ने दीनानाथ साहू, शाकुधन घसाद, नारायण जुला, पन्त्रयाग

में भी अग्रिम येखन युद्धि मिलनी

वेवकुमार बाबव, हांकर पांग, जयश्रीसम, स्रीमली द्वीलियेर टोप्पो, रामलान सिंह, छोटेलाल तूत्रे, सोमारसाय सिंह, साह ५२ सिंह, राष्ट्रमं श्रंत्र, झेनरी अभयकिशोरी टोपी, धनेश्वर सिंह. तुहन राम तथा अधिकाधिम संख्या में हर बताक ने रिजाक-सिक्तिकाएं उपरिश्वत थी। झिलको के प्ररताव को उसित कार्यवाही हेनु इसकी सूचना हेतु प्रदेश अध्याः सुरेश तियारी एव उप-प्रान्तक्यक थी. एस सिंह को दे दी गई ह। मुख्यगंत्री छत्तीसगढ कासन स्यूल हिला बंदी एवं आदिन जाति राल्याण मंत्री को सभी मांगों जो की जायज यांग हे स्वीकृत करने हेतु अनुयोध यन्न लिखा गढा 💷

रेगा. इसान संगदक जोजेल बस्तावा 20771-5533466 • Email-gopstasawa@yahoo.com, ambikavani@gmail.com

Annexure-J

Hindalco Industries Limited Samri Mines Division

Actual Expenditure incurred in Environment Management Plan

Total cost incurred for protection of Environment in Samri, Tatijharia & Kudag Bauxite mine of Hindalco Industries Limited of Chhattishgarh State during the FY 2023-24.

SI. No.	Environment Protection Measure	Actual Cost (Lakh) FY-2023-24	
01	Environment Monitoring	6.02	
02	Greenbelt development	9.0	
03	Reclamation/ rehabilitation of mined out area (Samri- 11.135Ha., Kudag-1.958Ha., Tatijharia-11.265Ha.) Total- 24.358 Ha.	73.074	
04	Drip irrigation	6.52	
	Total	94.614	

- Environment Monitoring Job has been out sourced to Anacon Laboratory, recognized by MoEF & NABL.
- One centralized nursery has been established at Samri mines for Samri, Tatijharia & Kudag lease.
- Reclamation of mined out land has been out sourced along with production. Average cost of reclamation considered @ 3.00 lakh per ha.

Apodu

For Hindalco Industries Limited Agent of Mines Samo Mines Division Hindalco Industries Ltd